YACHTING

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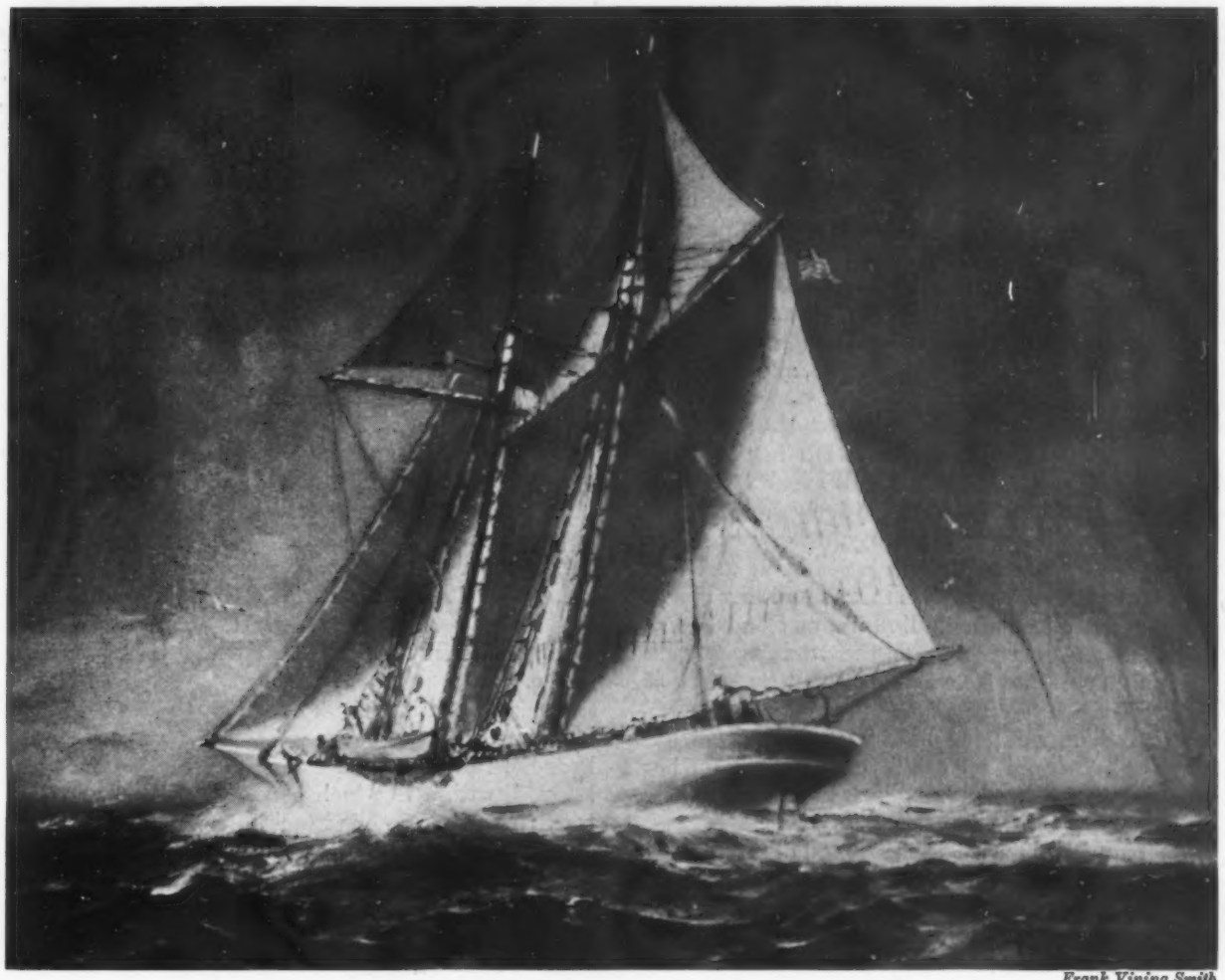


Frank Vining Smith

"Wander Bird," originally an Elbe pilot boat, has covered many thousand miles of blue water

"Carry Out the Kedge, Mister!"

By

WARWICK M. TOMPKINS

THE EXPERIENCED seaman strives for voyages utterly without incident. As he grows older and more wise, he approaches nearer and nearer to that state of perfection where no smallest item of gear carries away, where no lee shore ever looms threateningly through scud and spray, where no men go overboard. And lo! That man has no stories to tell, no auditors hanging with bated breath upon his casual summary of "a pleasant voyage" which covers, perhaps, a world-girdling feat. It is the man who can tell of grief and destruction who gathers delighted listeners about him; if we assume that those listeners are so absorbed because they wish to learn what follies to avoid rather than because of a morbid delight in another fellow's misfortune, we shall have a pleasanter picture of human nature.

It is always difficult for the master of a ship to speak of mishaps to his own vessel because the inexorable law of the sea has ruled that all such are his own fault, whether he be aboard or ashore, on the bridge or getting much needed rest. But those who know the sea are rarely keen to travel with that sailorman who claims never to have been in a tight fix because, until a man has known the hard labor, heartbreak and misery of disaster he can never have attained that degree of caution, vigilance and humility without which his days at sea are surely numbered.

Here is the story of a misadventure which I brought on my ship and of the way we extricated her from the difficulty which my negligence and the unkindness of the gods had brought upon her. Read and learn, and I hope you'll find extenuating circumstances so that your judgment of this particular sailor will not be altogether adverse.

+ + +

We had sailed slowly northward from Dominica, where one's anchor hits bottom at seventeen fathoms three lengths

from shore. Now, ghosting into Basseterre, capital of the tiny island of St. Kitts, I had too vividly in mind the labor of getting all that chain and its heavy anchor, and I was eager to spare my small crew a swift repetition of that arduous task. There was nothing in the way of range lights or buoys to guide us in. Like most West Indian ports, Basseterre clings to the lee side of the island, fronting the Caribbean. One anchors in that cobalt sea, in the lee of high land, but with nothing else in the way of shelter.

The chart showed a gradually shoaling bottom with three fathoms of water within 75 yards of the beach. The Bo's'n had the lead going. "We'll let go in four fathoms," I warned him, and a moment later he sang out, "Four fathoms!"

"Let go!" The hook crashed down, rust dust smoked through the hawse pipe and in the sudden silence following we could hear rippling wavelets on the shore. Dawn was coming but the town was fast asleep. A mile to the southward the dim oil lights of a tramp freighter glowed sullenly. The jibs were in the jibboom nettings. "Snug down and turn in," was the order. It looked like a flat day coming, and we would let mainsail, topsail and foresail stand.

It proved a muggy day with fitful gusts from the eastward. We'd be too close to the beach anywhere but in the trade wind region, I thought at noon, as the *Wander Bird* rode easily over a peculiar but unalarming westerly swell.

After supper I went on deck. Suddenly, I knew we were too close to the shore, regardless of our latitude. It was now flat calm, but off to the southwest there was building one of the most frightening ranges of cumulo-nimbus cloud I have ever seen. Beneath its towering peaks the ocean was black as ink, and from its tattered foundations swept a curtain of rain.

The freighter suddenly started belching smoke from her shabby funnel and I could see white clad figures on her bridge, a white jacketed mate hanging over her bow studying his anchors.

"On deck! All hands!" The seaman's grand old battle cry went speeding through the ship, and quick pounding feet responded. "Get your anchor! Let's get to hell out of this place!" How fortunate that the heavy sails were all set and ready! We should have that topsail furled but there was no time to bother with it now. It was the middle of November, with the hurricane season well past, but this western sky brooked no delay. Hurricanes sometimes come belatedly. We wanted sea room, and quickly.

The old-fashioned windlass brakes went walking up and down and the metallic clicking of the pawls was music. The wind came down, hard. The ship heeled quickly, her sheets whimpering with the sudden strain, and then she faced boldly up into it.

"Anchor's aweigh," the Mate sang out forward as a deluge of stinging rain hit us and blotted out the shore lights. The ship swept away on the port tack. This would be a short hitch for the beach was near at hand, curving to the westward in a swinging arc.

"Ready about!" The instant I judged we had way enough the helm went down and eased jibs thundered as they spilled the wind. "We're well out of this place," I shouted exultantly.

And then, in the eye of the wind, something happened. The ship hesitated, stopped, and at once gathered sternway under the punch of the gale. The anchor, broken out, had not got entirely clear of the bottom. Sailing fast we had dragged it willy nilly, but in that delicate moment of coming about, when the vicious slap of a big sea can ruin the maneuver, the crippling drag of hook and chain had hobbled us hopelessly.

"Back your jumbo and slack main sheet! Get that anchor this time!"

Not a second was to be lost. With great good luck we might again pay off, gain way and tack before we hit the beach. We tried. There wasn't sea room enough. A sea had jumped up, and now, as we sank in a trough, the life went out of the ship. She took the sand with a deceptive gentleness, and at once became as incredibly soggy and dead as only a vessel ashore can be.

With the swiftness with which it had come, the great cloud swept up the side of the island, poured over its peak and disappeared. The rain passed with it and only the surging seas remained to complete the ugly trick of ill fortune. The quick tropic night had come. It was very dark. With every sea the ship lifted and drove inshore a foot or two. Still, she didn't seem to be hard aground. Possibly we might get her off by quick work.

The text books of seamanship declare that the first thing to do when one goes ashore is to break out the sounding lead and take soundings. I beg to differ with them. The first thing to do is to rush out an anchor to where you were afloat and thus hold your ship from working farther inshore.

"Carry out that kedge, Mister!" I yelled to the Mate, and as he ran forward to cut lashings I burned a flare. There were heavy pulling boats drawn up on the beach and I wanted one. Carrying out big kedge anchors in a dory is no fun. The hands were getting in our sails in the eerie blue light of the flare. A crowd had gathered on the beach and at last a boat appeared under our counter.

As we pulled away, with the anchor stocked and bent to the main peak halliard which was coiled between the thwarts, I sent the Mate to get the 450-pound port bower ready. We'd carry that out, too.

We smashed that hulk of a boat to the westward, pulling hard up the face of steep, crested seas, and planted the kedge. In another half hour we had the big hook out and buoyed, with a five-inch hawser bent to it. Both warps we took to the big anchor winch forward. The bow was inshore and we hoped our fast work had prevented the entire length of the keel from grounding. If she were fast only forward there was a good chance of success.

The warps rose dripping from the sea as we put the strain on them. The ship presented her stern more fairly to the sea and her motion steadied appreciably. But she did not move an inch to the westward. "She's off!" shouted an inexperienced hand as both lines gave a trifle. But she was not off. The anchors were coming home.

"Avast heaving," I called. There was no use working now until the tide came. "Turn in and get what rest you can. There'll be plenty of work before long."

The tide, according to the establishment of larger ports near by, should be high about three in the morning. It was now eleven. A rise of eighteen inches only could be expected under the best conditions, but soundings taken now indicated that that might be enough to get us afloat. The ship was apparently hardest aground just at the foremast in eight feet of water. She draws seven feet at the bow, ten feet eight inches aft.

The seas ran with undiminished viciousness. It was hard to believe that such a short-lived squall could have kicked up such a fuss. I wished vainly I had not tried to get under way.

The corporal in charge of the harbor police came aboard to offer assistance. "High tide about three, eh?" I asked, checking my calculations.

"High tide? What you mean, high tide?" he echoed perplexedly.

"Deep water. Tide. High water," I reiterated with great redundance, trapped as a sailor always is when asked to explain in landsman English a term so perfectly expressed in the beautifully precise language of the sea.

But the corporal shook his head. "Ah don't know, sah. You'll have to ask the Commissioner of Police, Ah reckon."

The man was not stupid, as I at first supposed. None of the waterfront blacks who had come aboard to earn a few shillings at salvage seemed to understand my inquiries about the tide. Finally I faced a grim fact. Tide tables to the contrary, there was no one here who knew what a tide was. Ergo, there could be no tide!

And there was no higher water at three. Furthermore, the ship, hammered by the sea, was somewhat further inshore.

"Tomorrow morning," I planned with the Mate, "we'll go to the steamer and try to borrow an anchor that *will* get us off." Then I turned in and tried to rest, only to lie wide-eyed through endless hours as the ship pounded, cursing myself for an incompetent blunderer.

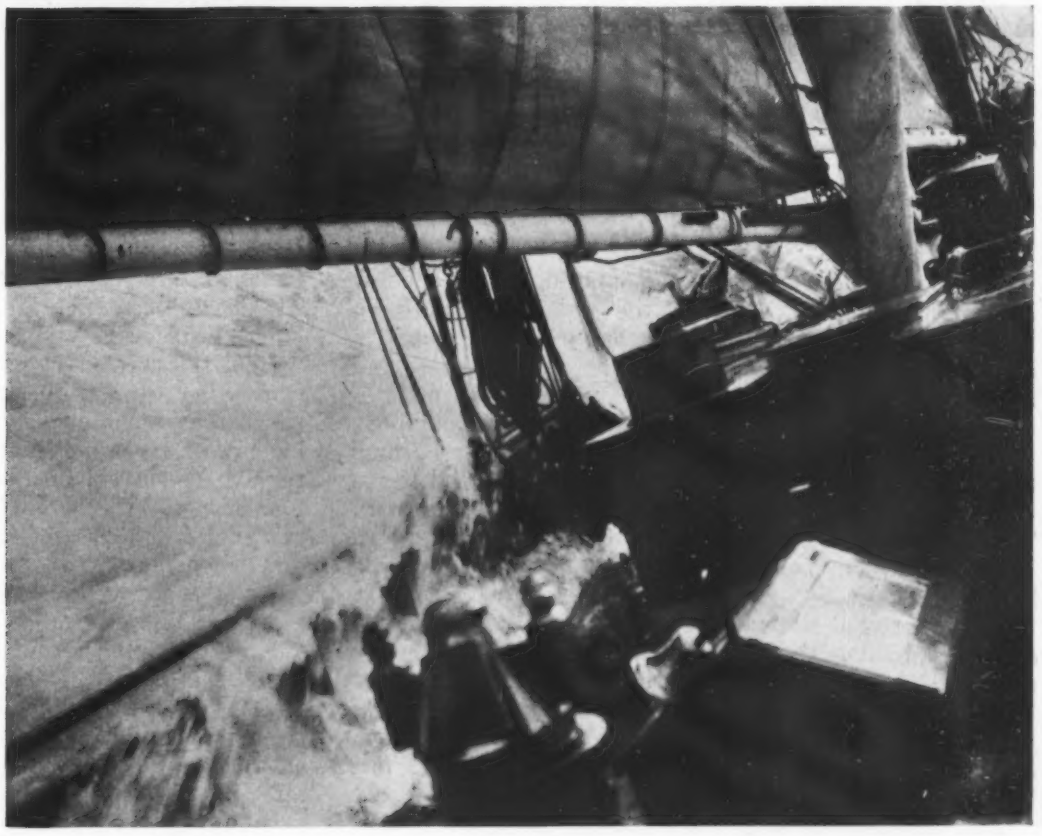
Long before the S.S. *Warrior's* (that wasn't her name, but it will do) cockney cook had his galley fire properly going I had swarmed up her leprous side and waded through coal dust inches deep to her bridge house, an island of comparative cleanliness rising from the grime of a collier's ugly hull. A sympathetic second mate, astir early, unhesitatingly awoke the first officer, who in turn, sensing my distress, took me to the Old Man's quarters. Captain Dunbar slept, and I shivered in trepidation as his Mate awoke him, wishing I had been able to delay my call for another couple of hours. But Captain Dunbar had been reared in sail and he understood my perturbation. His welcome, as he sluiced sleep from his eyes, was courtesy and consideration to a degree.

"I need a heavy kedge anchor and a hundred fathoms of good wire," I explained finally. "My ship has rolled herself into a sand dock and I can't move her with my own gear. I've tried all night and failed."

"'Twas a nosty blow, yester'een," burred Dunbar. "I thocht I sighted ye gettin' awa' as it hit. Me, mesel', thocht it was a bleedin' horricane. We was standin' by to get to sea oursels. And so the wee schooner is on the beach?"

"Weel," he dried his thinning hair, "ye cairtonly shall have the kedge and the wire, and I suppose you'll also be needin' of a boat to carry them. Thot, too, ye shall have, and if you'd like a couple of hands, just say the word. Mr. MacPherson, would ye no like to try your hand at a bit o' salvage?" This last to his Mate.

"Hold hard, Captain Dunbar!" I interrupted. "Your anchor and wire and boat I'll take with gratitude if you will let me. But this ship is all I have in the world — home, livelihood and pleasure all in one. Making the deep water voyages I do I cannot carry insurance, and there's nothing with which to pay salvage. So if it's that you're looking for I



Watching the "Bird" slip through the water on one of her ocean passages

Slamming her into it as a trade wind squall pushes her lee rail under

shall have to get along. I can lighter out the ballast and get her off myself, if I have to."

"Now, now, don't take it amiss!" hastily amended Dunbar. "I used the word in its literal sense only. Ye're a sailorman after me ain heart and ye're in distress. An' besides, didn't ye say ye had the Missus and a pair o' babes aboord? We'll help ye and proud to do so, and it will cost ye naught.

"An' furthermore!" He put down his towel and spoke impressively. "If ye can't get her off wi' the kedge, we'll fetch the *Warrior* around tonicht after we've knocked off cargo, and we'll shift ye with our own winches!"

So the first and second mates, relieved for a day from the tiresome task of checking coal dust briquettes out of the holds, and two old sailing ship hands, were assigned to the salvaging of the *Bird*. We swung out a ponderous yawl boat which, in the water for the first time in years, leaked like the proverbial sieve. The carpenter and an engineer were called in to assist in getting the 1000-pound kedge adrift from a bulkhead where it had been bolted since the day the ship was launched, and a winchman lowered it away to a sling passed around the boat. We unrove a hundred fathoms of one-inch wire from a cargo winch and flaked it in the bottom of the boat. With foresight we raided the bosun's locker, collecting some line, big spikes, a couple of shackles and other such gear, "just in case." Then we pulled laboriously back to the schooner and got to work.

So we entered upon fourteen hours of unremitting labor, and with it began a tropical downpour of stinging, chilling rain of such intensity and fury as I had never experienced. Such rain storms have to be experienced to have a semblance of reality. Words do not do them justice. At times, in such storms, one has to hold protecting fingers over nose and mouth to breathe, and the eyes are blinded. Decks adequately supplied with scuppers will run inches deep in solid water in such weather.

Normally, such a squall, at the worst, lasts only a few hours, but this day at St. Kitts, during the pause between the hurricane and the trade wind season, the downpour continued unabated, adding immeasureably to the difficulties of our task, fraying nerves and tempers, softening hands and making lines stiff and heavy.

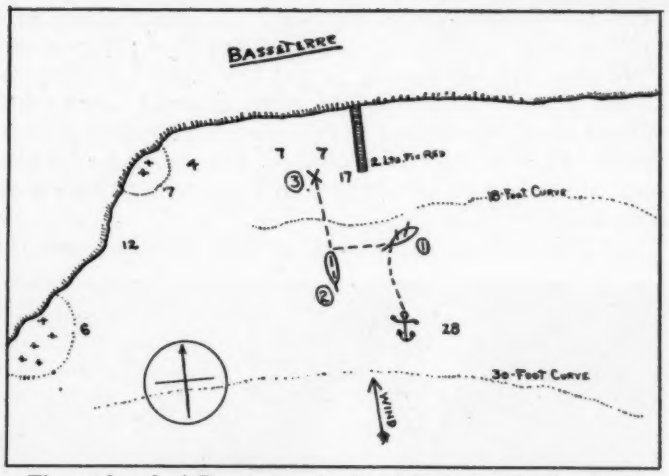
We rowed the big kedge out, slashed its sling with an axe and cast its guardian buoy clear. Aboard, a gang of eight blacks stood at the windlass brakes, a welcome addition to our small crew. One was a chanteyman of ability unusual in this day, and to the stirring tune of

> "Oh, a Yankee ship came down the river,
> Blow, my bully boys, blow!"

the windlass again started turning, opposing groups bending and straightening as they flung the brakes high and then hove them down. Voices came in strongly on the old chorus, and muscled backs stripped of shirts gleamed black and metallic, streaming water. There was power in the swing of the song and power on the windlass. In the waist, my boys were handling the warps to our two smaller kedges, keeping them taut with the mainmast winch, and it seemed to me that now nothing could foil us. Warps and wire came taut. The ship again sensed the strain. But she did not move. We hove harder until everything was bar taut. Nothing happened.

Then we rigged all our heavy booms and gaffs far out to starboard, hauling them out with boom tackles. We hooked a heavy shore boat on fisherman halliards and knocked out her plug, filled her with water and hoisted her clear. So we gave the ship a sharp list, thinking thereby to break her keel from the suction of the sand and reduce her draft a few inches. And again we turned to the winches.

The chanteyman sang more slowly now. The winch



The roadstead of Basseterre, showing (1) where "Wander Bird" anchored; (2) where she lost headway, and (3) where she grounded

complained as it turned reluctantly. The wire ran out taut as a fiddle string for 70 yards and then plunged into green water. Eager and sensitive fingers gripped it, alert to any quiver or slackening of tension.

And then it started! Indubitably, the cable was coming inboard. The chorus forward had, of a sudden, an exultant beat. But we were only bringing home that thousand-pound anchor, bringing it home uphill! No anchors of ours and no power we could develop would move the ship.

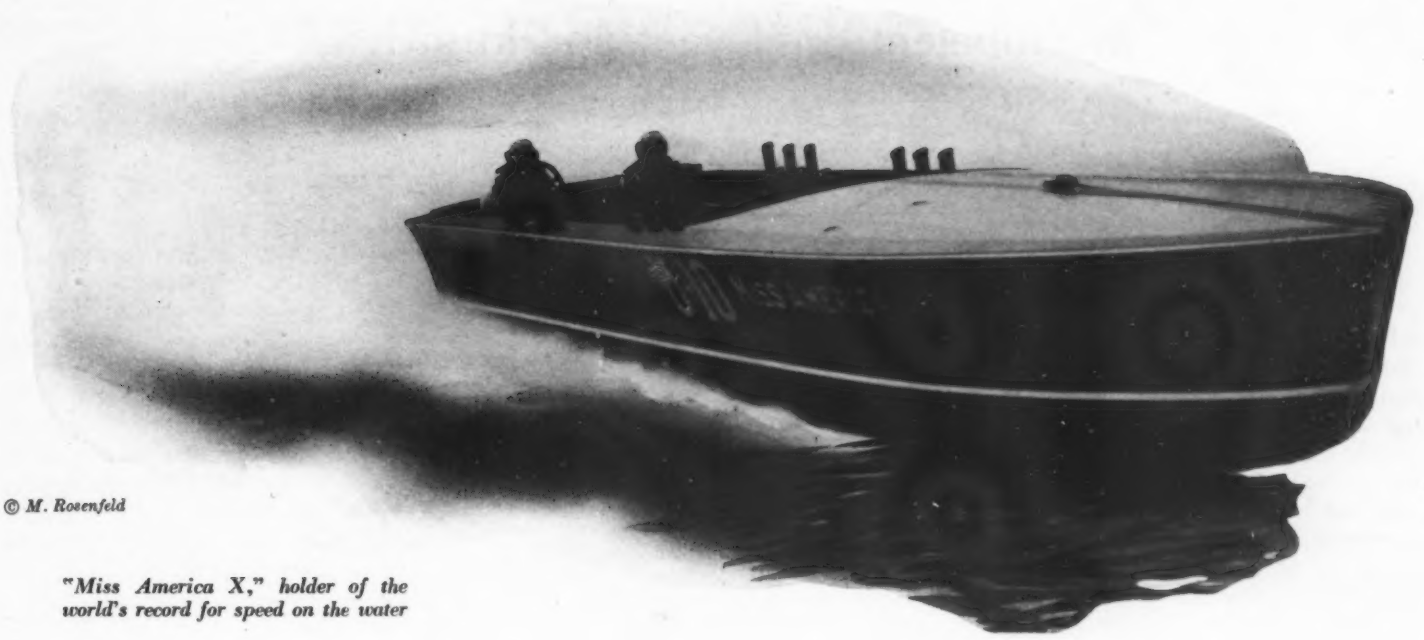
Captain Dunbar came aboard for lunch to survey the situation. The meal was marked by dishes that clattered and jumped as the ship rolled and pounded in the dock she was digging for herself. "Shifting that ballast would be a hard job, eh?" he asked. I showed him where it was, jammed tight under floors screwed down hard, thirty-five tons of pig iron, scrap and other bits of heavy metal. Lightering that out, piece by jagged piece, passing it into a lighter, unloading the lighter ashore and then repeating the process — what a nightmare to contemplate in a steaming tropic port! "We'll come over this evening," finally declared Dunbar. "I guess the *Warrior* will shift you all right, all right."

We rested for an hour while a plume of smoke from the *Warrior's* funnel told of steam pressure building in her boilers as the last leisurely lighters made their final journeys shoreward. Then the big steamer got her hooks, moved out to sea and back again, anchoring 250 fathoms away to the westward with her two bowers and with her stern inshore.

"To carry out a line" is a glib phrase on the tongue, bearing hints of light, speedy work; oftentimes it is anything but that. The yawl went alongside the *Warrior* and took endless flakes of three-inch manila line into her capacious belly. Then she pulled back to us over the calm sea, paying out line as a spider does its thread. With the bitter end aboard we took this precious cord to the winch and stood by to bring across the towing line. *Clickety-clack, clickety-clack,* the winch rang monotonously to the chanteyman's song. The big hawser, seven-inch manila, came through the water with relative ease until its end was bent to a hundred fathoms of four-inch steel wire. With the hawser finally soaked through and sunk by the weight of the wire, our work became slow and tedious. Foot by foot the hawser came our way. Through the glasses we watched the end of the wire drop over the steamer's high side, followed by more heavy manila.

No ordinary bitts could stand the strain which the ship would shortly have to bear. I didn't even like the idea of making that hawser fast at that traditional point of great strength, the butt of the mainmast. No, we'd bridle the entire ship. So we ran a heavy wire through the starboard after hawse hole or, more properly speaking, the cat hole,

(*Continued on page 98*)



© M. Rosenfeld

"Miss America X," holder of the world's record for speed on the water

Gar Wood's Record Safe

By "VITESSE"

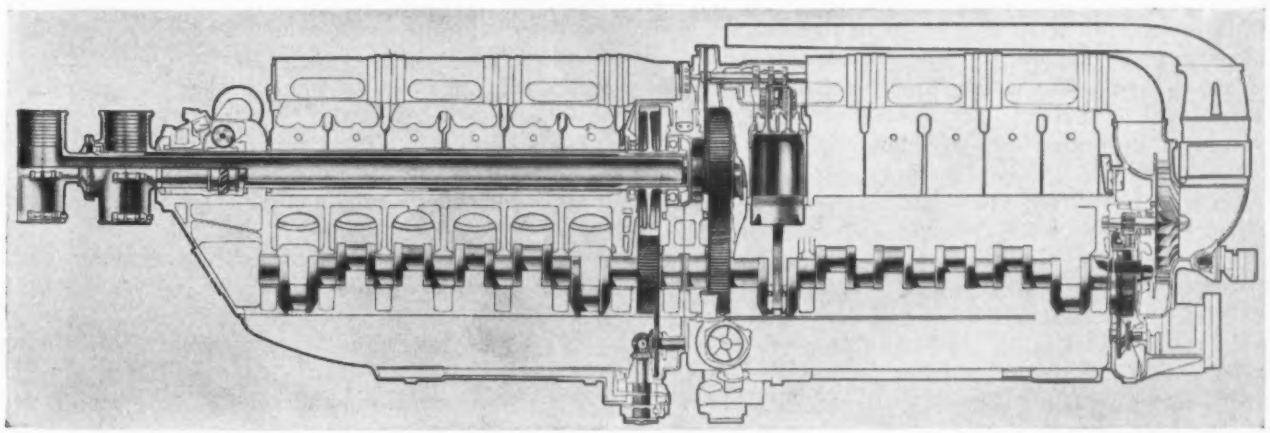
SEVERAL reports have appeared in the American press to the effect that Italy is seriously considering an attack on the world's water speed record of 124.86 m.p.h. at present held by Gar Wood. Though Italy has made great strides in the sphere of motor boating during the past four years and at the moment holds the majority of the official world records, it is extremely doubtful if a craft capable of 130 m.p.h. will make an appearance during the coming season.

It was not unnatural to assume that, with her present policy of obtaining world supremacy on the water, Italy would release one or more of her 24-cylinder Schneider-type Fiat engines for use in a world beater. But for technical difficulties, it is pretty certain that she would have done so by now. On paper, one of these motors, which for the recent air record of 440 m.p.h. was "boosted" to deliver 3,100 hp., should be quite sufficient for the job since the power-weight ratio is almost exactly equal to that of the Rolls Royce, namely, 0.7 lb. per brake horse power. But a study of the accompanying drawing will make clear the amount of development work which would be necessary before this motor could be employed in a hydroplane. It is quite useless "as is."

In actual fact this unit consists of two 12-cylinder, V-type motors arranged in tandem and driving the two air propellers through gearing. Now, in order to get the propellers to rotate in opposite directions, to overcome torque reaction, the two crankshafts are quite separate and of opposite rotation, yet at the same time the design is a single motor in that one supercharger feeds all 24 cylinders. In order, therefore, to convert this motor for marine use it would be necessary to break it into two separate units again, in other words, to bring it back to its original V-12 form and then start developing it for boat use. A costly business.

Count Rossi, who raced *Torino* years ago with one of these 12-cylinder motors in its original unsupercharged form, has built a new hydroplane with the engine "boosted," but it should not be supposed that he is contemplating any attempt on Gar Wood's record, for it is doubtful if this new boat will be capable of developing a speed of much more than 100 m.p.h.

At the time of writing, it can be taken as almost definite that no European attack on the world's unlimited record will be made next year, nor will there be any challenge for the Harmsworth Trophy either from Italy or Great Britain.



This 24-cylinder Fiat drives two air propellers in opposite directions through hollow concentric shafts. The supercharger is on the after (right hand) end. The engine is really two opposite rotation V-12 motors assembled to form one machine

"Incompetent, Irrelevant and Immaterial"

By

ALFRED F. LOOMIS

Editor's Note: In making our semi-annual survey of the activities of Alf Loomis, we discovered that since his appointment to the editorial staff of YACHTING *he has cut his literary (as he calls it) output in half, but has not neglected to call at the office on pay day. While this may have been a gain to our readers, we considered it a loss to the editorial budget and wrote asking him to contribute an article for the current issue. He replied that he had been busy reading the word-by-word testimony of witnesses in the Murder Trial of the Century, that the tactics of cross-examining attorneys had shown him how easy it was to make something out of nothing, or vice versa, and that the subjoined letter was a case in point. We publish it with the usual misgivings.*

Dear Skipper:

I MET by appointment the other day two lawyers, named Smith and Jones, who are bitter enemies before the bar of justice, but friends before any other bar. They had been thinking of buying a boat for the coming Norway race, and Smith, who is a friend of mine, asked me to navigate her for them. Jones was not sure of my ability as a navigator, and a meeting was arranged at Smith's home for the purpose of inquiring into my skill as a navigator.

As I was Smith's witness, as you might say, I had no trouble in direct examination. In response to his questions I offered the information that I had navigated a sub-chaser in the last war, that I had also navigated sailing craft in ocean races, and that, with the trifling exception of a race in which I navigated my own boat, I had never failed to make a good landfall.

Smith thereupon thanked me and told Jones that I was his witness. With bows left and right to where judge and jury should have been sitting, Jones placed himself before me and began his cross-examination. No court reporter was present, but I think I have been able to set down his questions and my answers with reasonable accuracy.

Q. — Mr. Loomis, are you a Norwegian? A. — No.

Q. — Do you speak the language? A. — No, except that I can say "Skål."

Q. — If you do not speak the language, how do you expect to know when you have reached the Norwegian coast? A. — If the language that I hear spoken is not English, I shall assume it to be Norwegian.

Q. — But it might be Swedish? A. — Yes. Q. — Or Danish? A. — Yes. Q. — Or Latvian, or Estonian, or Finnish? A. — Yes, yes, no.

Q. — I see. Now you said that you were a navigator in the Naval Reserve. What method of working up your sights did you employ? A. — Marq St. Hilaire.

Q. — That was an up-to-date method then? A. — Yes.

Q. — Is it still? A. — No.

Q. — Do you still employ it? A. — Yes.

Q. — Mmmm. Don't most competent navigators use the method known as H.O. 211? A. — Yes, or 208.

Q. — Two-O-Eight? What trigonometrical formula is used in this method? A. — I don't know.

Q. — But you do understand trigonometry, do you not? A. — I do not.

Q. — Yet you call yourself a navigator. A. — (No answer.)

Q. — And you don't use 211, which is favored by modern experts? A. — No, but I think —

Q. — Don't tell me what you think. In using the St. Hilaire method do you ever make mistakes? A. — Frequently.

Q. — What kind of mistakes? A. — Addition, subtraction.

Q. — Do other navigators make mistakes? A. — Not that I ever heard of. There's always a current.

Q. — Now, how far is it from Newport, R. I., to Bergen, Norway? A. — I haven't looked that up yet.

Q. — You mean you don't know? A. — Yes.

Q. — I thought so. But you do know the latitude and longitude of Bergen? A. — Not offhand.

Q. — But you expect to make a good landfall if you navigate our boat to Norway? A. — Yes.

Q. — In 1932, in the Bermuda race, is it a fact that the schooner *Mistress* was in sight ahead of you for several hours before you made your landfall? A. — Yes.

Q. — And is the *Mistress* entered in the race to Norway? A. — I hope so.

Mr. Smith: I object to that question as incompetent, irrelevant, and immaterial.

Mr. Jones: But witness has already answered it. He said he hopes so, and the implication is plain that —

Mr. Smith: I move that the answer be stricken from the record.

Mr. Jones: Very well. Q. — Now, Mr. Loomis, in the 1934 race to Bermuda, did you sight a steamer outward bound from those islands shortly before you made your landfall? A. — Well, there was a steamer, but —

Q. — Answer yes or no. A. — Yes.

Q. — I see. What steamship lines ply between America and Norway? A. — I don't know.

Q. — I understand that you navigated the *Brilliant* in her Transatlantic crossing in 1933. A. — Yes, and there were no other —

Q. — Thank you. And recently, after you made known your readiness to navigate the *Brilliant* to Norway, did her owner tell you that he would be unable to take part in the race? A. — Yes, but I —

Q. — Please confine your answers to the questions asked. Now, in the Gibson Island race in 1929, when you navigated your own boat, did you make a good landfall on Chesapeake Lightship? A. — No, that was lousy. (Witness fidgets in chair.)

Q. — But in 1931, when you were also navigating your own boat and there were larger boats in the vicinity, you won the Cape May race in your class, did you? A. — Yes.

Q. — Is it not the fact, however, that you were the only boat to finish in that class so that whether you had taken four days or four weeks you would have won? A. — Yes. You see, it blew one night —

Q. — But you want it to blow when you are racing, don't you? A. — Not too hard. My stomach —

Q. — Forgive me for interrupting. Do you get seasick? A. — Yes.

Q. — Do other navigators get seasick? A. — I have been told —

Q. — Not what you have been told. Of your own knowledge, do other navigators get sick? A. — Not any that I have been shipmates with.

Q. — You have been shipmates with other navigators, however? A. — Yes.

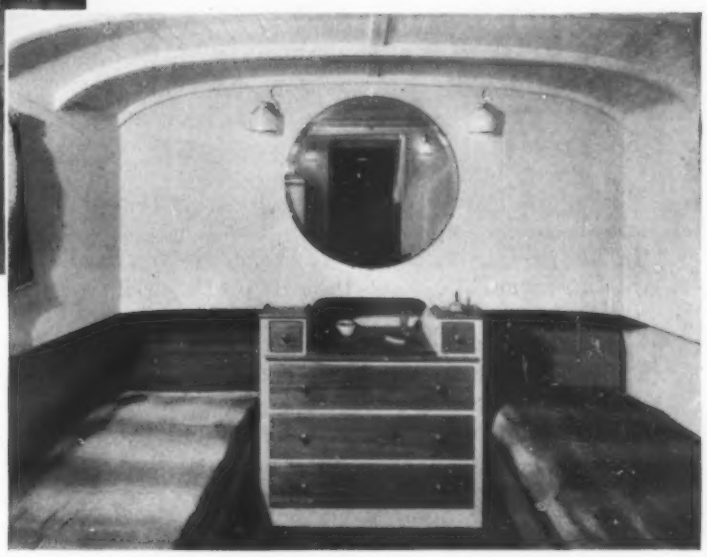
Q. — And when other navigators took sights with you, did your results conicide with theirs? A. — Not exactly.

Q. — But they were good navigators? A. — Yes.

(*Continued on page 100*)

This new Elco motor yacht, exhibited for the first time at the 1935 Motor Boat Show, is 48 feet 5 inches long, 12 foot 4 inch beam, and 3 foot draft

At the left is the sunny deckhouse, which has extension berths for two, while below is a glimpse of the after cabin. There are also two single rooms and bathroom aft. Forward are galley and forecastle for two men. Two Elco F-62 engines are installed under the deckhouse



Elco's Newest Motor Yacht

Fire Down the Bay

Simpson Helps With a Rescue Job and Keeps the Engine Dry

By B. J. PLATT

T NOON of the second day of the "line gale" I go out in front of my house after dinner and look at the harbor. I have to lean over against the wind to keep from being blown off my feet. The air is full of the roar that turns to a screech when it comes up against anything like a tree or a house, and down below me the harbor is streaked with foam in lines that reach the whole way from the mouth of the river to the docks. Out beyond the mouth the wind is taking the tops off the waves, and the islands are out of sight in a driving white mist.

Then I smell burning wood in the wind. I can't see any smoke, but the smell is strong and getting stronger. From where I stand there's nothing to windward of me but the mouth of the river and the islands in the bay out beyond. All I can think is that one of the islands must be burning. It hasn't rained for a month, and the gale isn't likely to bring rain until the third day.

I get my oilskins from the house and run down to the docks. Joe Peevey and his two brothers George and Herb are there, smelling the wind and wondering what to make of it. The gale shakes those old fish sheds so you can hear every nail in them shriek, and the nets on the driers are flapping like sails.

"Smells like one of the islands is burnin'," I shout.

The smell is so strong now you think the dock where we stand is smoldering.

"A wind the same as this could carry that smell an awful ways," Joe says.

Old Fred Gates comes up, and he says it smells to him like a blaze on Mosely's.

"Them islands don't all smell different, do they, Fred?" I asked, shouting it at him.

"Sure they do," he says. "How do you think I find my way up through 'em when it's thick, if it ain't by smell?"

We laugh at that, but we take some stock in what he says. Mosely's is about nine miles down the bay. It isn't a very big island, but there's a lot of scrub on it and a house and barn where old man Mosely and his wife and three daughters live.

It begins to look like we ought to go down and see what the trouble is. Then Pete Simpson comes out of his boat shed. He's practically a newcomer to our village. He hails from somewhere on the Great Lakes, and he isn't generally liked because he thinks Maine folks are awful dumb.

"There's a fire down the bay," he says, in his cocksure way.

It sounds like he knows more than we do about it, so Herb Peevey says: "How do you know?"

"Can't you smell that smoke in the wind?" Simpson shouts at him, as though he thinks we're too dumb even to use our noses.

"We were just thinkin' we might run down and see if there's anythin' we can do," Joe puts in.

"What are you waiting for?" Simpson says. "No time to lose in a case like this." And he runs down the dock toward his boat.

By then two or three more have gathered, and we all separate to get our boats. Joe asks me to come along with him, because my boat is hauled out.

Bent over against the wind, we start down the path to where he keeps his skiff. When we're halfway to the water, we hear a holler behind us, and there's his wife Margaret on our heels. She's all togged out in oilies, and she wants to come with us. Joe lets her come, because she's a big husky woman and goes out often with him to pull the pots.

I row going out to the *Katie*, and it's a mean job. When I lift the blade of the oar clear of the water, the wind blows the oar out of the thole pins. We get blown ashore half a dozen times before we can make fast to the power boat where she's snorting around and weaving back and forth on her mooring.

With the second hand engine Joe has put in the *Katie* she's the fastest and ablest boat in the harbor, except maybe for that boat of Simpson's. Our boats, you know, are the open Hamptons, from 20 to 30 or 35 feet long. We carry a canvas spray hood on them that's like a tent over the forward part of the boat, with its after side open. It keeps the spray from coming aboard, and it protects the engine, and it's a damn handy thing to stand behind in cold weather.

Simpson won't have a spray hood on his boat. He claims they're ugly and that he'd rather be able to go forward when he wants to than have the bow covered over. Of course, he doesn't pull a line of seventy or eighty crab pots every day from April to December. He owns the boat shop and sits ashore and talks. He won't have a Hampton, because he says they aren't built right. What he has is a nice enough little boat, but he paid about six times as much for her as any of us did for ours. He has an engine in her that cost a lot of money, while Joe paid twenty-five at a junk yard for his old motor.

We have plenty of trouble with our old mills but we can't afford to buy engines like Simpson's, as we make just about enough to get another old one every season or two. If we can keep them dry they do well enough for a fisherman.

It's really none of Simpson's business what kind of motors we use, but he says that some day we won't be able to keep them dry, and then we'll be in a jam. And I think likely Simspon is thinking this is the day he's been looking for.

Joe crawls in under the spray hood and puts the crank to *Katie's* engine. Margaret and I get down out of the wind and wait. I hand him the gas can, and he primes her a little. Then he rocks her two or three times and throws her over. Off she goes like a clock.

We cast off when the other boats do and start out against the gale. Joe has to handle her like she was a cat boat, because the wind heels her down almost to her gunwale when it catches her on one side or the other.

In the harbor the water isn't so wild, and Simpson, with his son Paul, takes the lead for the mouth of the river. The tide is ebbing, and where it comes up against the sea from outside the waves make up until they're nigh twelve feet from trough to crest and not much over twenty feet apart. The river mouth is about twenty fathoms wide with mean black rocks on either side that are covered with spray and green water until you can't be sure whether you see them or not.

Margaret and Joe and I hang onto the spray hood and watch Pete Simpson's boat go into that mess. The seas are so short that Pete has to angle the boat over them. Her stern raises up as the first one rolls under her until her wheel spins and her rudder hangs in the air. Then she disappears, and the sea climbs up in front of us like we're going through the base of it. Joe angles us up the side of it, and the top blows into our faces in a sheet that nearly knocks our heads

"'Katie' runs her nose under and, when she commences to lift, a load of green water comes rolling at us over the spray hood"

off. Pete's boat is down below us when we reach the top. He's in the bow hangin' to the wheel, and Paul's on the port side amidships trying to wrestle some of the water out of her with a bucket. As the next wave lifts her nose the water runs aft and slops out over the stern, and Paul grabs the rail to keep from going overboard. As she reaches the top and goes out of sight again, we dive into the trough like we're going plumb to the bottom of the river. The *Katie* runs her nose under and, when she commences to lift, a load of green water comes rolling at us over the spray hood, but only what we stop with our faces stays in the boat. The rest of it blows off over the stern.

From the top of the next wave we don't see Simpson until we're just about to drop into the trough, then we catch sight of his yellow sou'wester as his boat starts to climb. He's a little off to one side of us, and we're overtaking him. His boat is wallowing heavily, but her engine keeps going, and her bow is to the wind.

We can't hear whether our engine is going or not, but she answers her helm and gives an awful shiver when she rears up her stern each time. It seems as though we can go up and down over these seas forever and not get anywhere, but without our hardly knowing it the strong ebb tide has been pushing us, until suddenly we clear and commence working to windward over the long flat rollers that the storm is bringing in from out beyond the bay.

We see Pete Simpson has come through. He's abeam of us and heading the same way. His boat is floating pretty low, and Paul is bailing. I look astern for the other boats. At first there's no sign of them, then I see one and another as they lift on the waves and disappear. They're makin' heavy weather of it and look as though they have no business being in that mess at all. I find out later that the rudder on Gates' boat has gone adrift and that he's had to steer her with an oar. He claims he sculled her and went by George Peevey like he was anchored.

Now it is a matter of steady plugging against the howling gale. The wind picks up the water and blows it a quarter of a mile at a time. It comes up against you like hail. All the time there's a whistling and shrieking like twenty devils gone crazy, and all the time that smell of burning wood gets stronger and stronger, so we don't forget what we're out here for. Joe works the *Katie* over near Simpson's boat, and I stick my head out from under the spray hood and holler at him: "Fire is on Mosely's."

He shakes his head in that cocksure way he has and yells back: "Not that far off."

Margaret and Joe and I look at each other, and Joe shouts to me: "It could be all the way to Halifax and this wind would bring the smell."

I nod in agreement. I've never seen it blow so hard as it does right now. The boats astern are fighting the wind, and the *Katie* is so flighty in the water that she feels like she is going up in the air any minute.

Then the rain begins to come. I've been thinking it would hold off till the third day of the gale, but this time it comes early. Margaret and I can see it when we look astern from where we sit; otherwise it doesn't matter, because there's so much water flying anyway. But we know it will make a difference coming back. It'll drive in under the spray hood and soak the engine.

A blurry shape in the storm to port looks like Crab Island, which means that we are more than halfway to Mosely's. *Katie's* engine doesn't miss a tick, but I guess the rain makes Simpson's boat pretty logy, because Paul keeps bailing and she slowly falls astern. The smell gets so strong that our throats burn, and we think we can see smoke in the air.

Suddenly Joe pulls me by the shoulder, and I stand up beside him. He points to what looks like a dark cloud on the water ahead of us. The splotch is almost as big as Mosely's Island ought to be, but it isn't time to see the island yet. We can feel smoke burning our eyes, and then black specks appear on the spray hood.

"Ashes," Joe hollers, pointing to the dark stuff ahead.

As we get closer to the island the ashes that reach us get

(Continued on page 96)

M. Rosenfeld

"Riptide," formerly the old Herreshoff racing sloop "Adventuress," assisted Commodore H. L. Maxwell in his discovery of handicap racing

I Discover Handicap Racing

By

HENRY L. MAXWELL

COLUMBUS, it is claimed, discovered America five hundred years later than Leif Ericson and "got away" with it, so George Granbery, "father" of the system, should have no kick at my "discovery" of handicap racing a mere thirty years after his first acquaintance with it.

Up to September, 1933, I had always regarded handicap racing as a branch of the sport which offered nothing more than a pleasant afternoon's sail for the contestants and which was a pest to the rest of the racing fleet. But in the Fall Regatta of the Indian Harbor Yacht Club of that year I noticed that the recently re-rigged "Forty" *Katharine*, and *Alsumar* seemed to be having quite a race. This fact must have been smoldering in my mind, for, three months later, when I heard that *Kalinga* (the old Herreshoff racing sloop *Adventuress*) could be bought for a song, I instantly got the idea of buying her, installing a motor, and racing her in a handicap class.

The result was that in the Larchmont Spring Regatta of 1934, I sailed in my first handicap race on *Riptide*, as *Kalinga* was now called. By the time we reached the first mark all on board realized that we were in for much more than a pleasant afternoon's sail.

However, it was not until I had taken part in five or six of these races that I was completely converted to the idea of handicap racing. Our Division "A" was not made up of a lot of crocks but included, besides *Riptide*, two revamped "Forties," one "O" boat, one Ten-Metre, and the Bermuda Race winner *Edlu*. All were in good condition and all but *Synthetic* were auxiliaries. (*Grey Dawn* and *Stormy Weather* raced once or twice.)

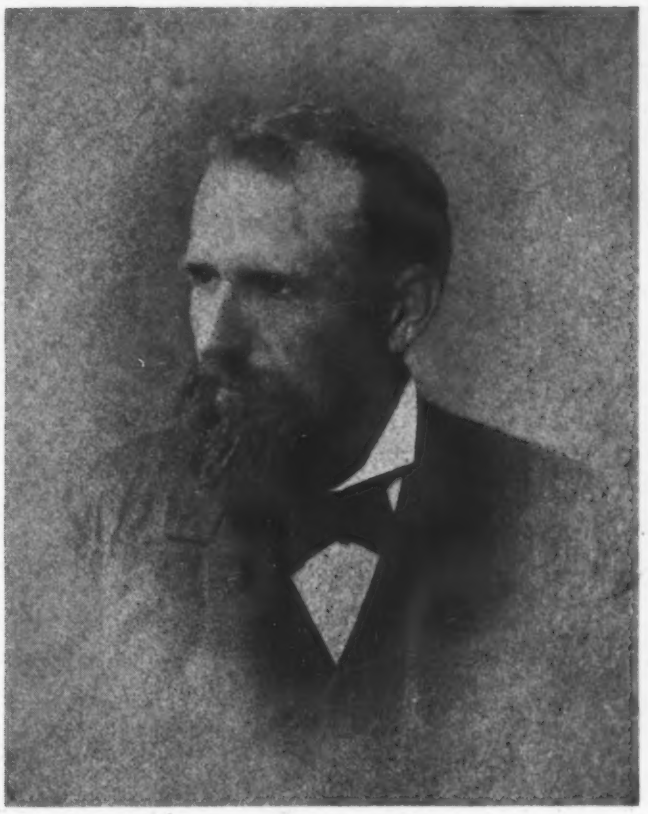
Riptide was always scratch boat and in her first race, thanks to a misjudgment of the official handicapper, Walter Sullivan, the percentages she had to allow were far too small. She won her first five races, but by the time she sailed her sixth race the percentages were about right. Here are the comparisons for *Riptide's* first and sixth races:

	First Race	*Sixth Race*
Katharine	2*	7
Mirage	4*	8
Edlu	5	10
Synthetic	3	6

For the rest of the season our chief competitors, *Katharine* and *Mirage*, received handicaps ranging between six per cent and eight per cent depending on the results of the two previous races. The handicap system is based on percentages of the best elapsed time of each race and after the first race works automatically, the percentages changing from race to race. In any given race the winner of the preceding race is set back one per cent and the second boat one-half per cent.

**Mirage* usually had to give *Katharine* from 1 per cent to 2 per cent, both inclusive.

(*Continued on page 104*)



Captain Joshua Slocum at the age of 39, when he was in command of the ship "Northern Light"

Cap'n Josh Slocum

Something About the Early Life and Adventures of the Famous Skipper of the "Spray"

By VICTOR SLOCUM

WHEN Captain Joshua Slocum sailed the sloop *Spray* around the world, over thirty-five years ago, he performed a feat never equaled in maritime history; other mariners had girdled the globe in vessels of small tonnage, but no one had ever before attempted the voyage alone.

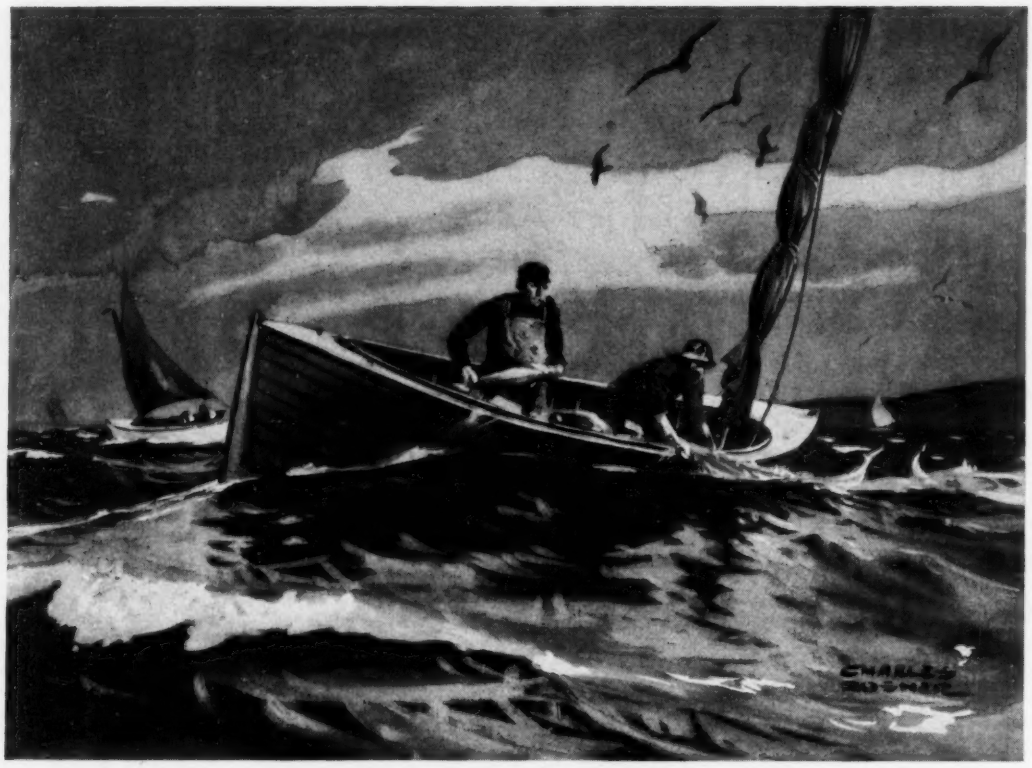
By this voyage, which was undertaken through pure love of travel and adventure, the Captain achieved the hitherto impossible on the sea, created an enthusiasm among blue water yachtsmen for long distance cruising, and thereafter became America's best known sailor. But, aside from this exploit, little has been recorded of my father's life and of the experiences and conditions which led up to and made this voyage possible.

The famous sloop *Spray* was 36 feet long by 14 feet beam and of 12 gross tons, dimensions making for a comfortable

The famous "Spray" in which Captain Slocum sailed around the world alone, starting when he was 51 years old

boat to live in. She was of a North Sea fishing boat model, and an admirable rough water sailer. Being perfectly balanced and rather under-rigged, she sailed either on or off the wind on a straight course for any length of time, without a hand at the helm. This fortunate quality in the *Spray* was a great aid to her skipper's powers of endurance at sea. The other factor which contributed greatly to the success of the lone voyage was his love of solitude, a trait which characterizes many sailors. In the *Spray*, the Captain set out from Boston on April 24th, 1895. After sailing 46,000 miles and circumnavigating the globe, he came to an anchor in Newport, R. I., on June 27th, 1898.

It was well known among seafaring men that he was making this trip and he was frequently and officially recognized on the sea highway and at ports along the *Spray's*



Always a good hand at boat building, Captain Josh built this 25-foot double-ended gill-net boat which he used in the salmon fishery on the Columbia River

route. The first leg of the voyage was across the Atlantic to Gibraltar, where the *Spray* was warmly received by the ships of the British Navy stationed there. The first intention of Captain Slocum was to reach the Indian Ocean by way of the Suez Canal, but on the advice of British officers this plan was altered, for, in their opinion, a lone voyager on the north coast of Africa might fare badly at the hands of the Berber pirates who were then much in evidence. The Captain noticed for himself, on an excurison across the Strait from "Gib" to Tangier in a torpedo boat, that small arms were kept at hand on deck.

Prudence, then, turned the head of the *Spray* toward Brazil, and from there she followed the coast down to the Straits of Magellan, after being entirely submerged by a gigantic tidal wave off the coast of Patagonia. This adventure made my father feel sure that both he and the *Spray* would be able to stand anything they might meet around Cape Horn. On the approach of the roaring wall of sea the *Spray* doused all sail and, without waiting to pass a gasket, the Captain swarmed up the peak halliards to the masthead. This was just high enough to clear the spume; below him, the vessel was smothered from sight for fully five minutes before she finally floated to the surface, on an even keel, draining her deck like a duck. All below was then found to be intact except for the few buckets of water which had spurted through the closed companion slides. It was the supreme test of *Spray's* watertightness and buoyancy.

Entering the Straits of Magellan, the *Spray* made the transit to the Pacific in about the same time as the fleets of the great navigator who discovered the narrow seaway, and the ships of Drake who followed him a century later in quest of Spanish galleons. In point of pure seamanship, the record of Captain Slocum with the single-hander *Spray* in the Straits of Magellan is the most remarkable of the three expeditions.

On emerging into the Pacific the *Spray* encountered one of Cape Horn's equinoctial gales which threatened to blow her west-about into the Atlantic again. Veering out a hawser to help break the following seas, she scudded southward. During the height of the gale and in the blackness of night, she cruised and tacked around Fury Island and in the Milky Way, one of the worst death traps to be found in any sea anywhere on the surface of the globe.

After winning her way back and passing Cape Pillar for the second time, the *Spray* rounded the worst triangle that any one-man ship could be called upon to weather. It is most unlikely that the experience will ever be repeated.

Across the Pacific the *Spray* made her way, rejoicing to leave cold storms and cruel rocks astern; thence across the Indian Ocean, around the Cape of Good Hope and into the South Atlantic, running down the trades as a full-rigged ship would have done, and with as much certainty.

Captain Joshua Slocum was born in Wilmot, Nova Scotia, in 1844, and came of a long line of seafaring forebears, although his father happened, by some calamity, to be anchored to a sterile, rockbound farm on which "Josh" grew up. For the first eight years of his life he lived in Westport, where he learned to handle a dory with the other boys of the town. Then his family moved to Briar's Island. At this early age he began to have a taste for small boats. Shipbuilding, rigging, manning and the related activities of seagoing formed the play of the youngsters of the locality.

At the age of eight, young Josh was declared to be of age to leave school and was put to work on the farm, leading the old gray horse at the plough. When he was about twelve he got his worst licking, and that was for making a ship model down cellar when he was supposed to be sorting potatoes. He would not have minded the licking so much if the model had not been smashed to pieces. That seems to have been the last straw, for he at once ran away from home to spend the next four years of his life fishing on the Bay of Fundy.

When he was sixteen he shipped out of St. John, N. B., in a deal drogher bound for Dublin. It was the beginning of his deep-sea life, in a full-rigged ship bound on a foreign voyage. It was a life he always enjoyed to the utmost. I never heard him advise a young man not to go to sea.

On sailing day, most of the sailors were put aboard drunk, the usual procedure, and this was his first sight of men in liquor. From a strict home atmosphere he inherited an extreme distaste for both rum and tobacco. After he became officer and master nothing would start him into action more

quickly than to see a sailor coming over the rail of his ship drunk and looking for a fight.

On leaving port in the deal drogher bound for Dublin, Josh and his chum, another boy of the same age and experience, were the only two forward who were in fit condition to take the wheel. They were both in earnest about going to sea, and when at the end of the voyage the Dublin pilot called for the best hand at the wheel to steer into port, one of the pair was sent aft.

While on a voyage from England to China in the British ship *Tanjore*, in which he was an ordinary seaman, the young Josh was left with fever in the hospital at Batavia. There he found a good friend in Captain Airy of the steamship *Soushay*, who rescued him from that pest hole of the Dutch East Indies. The route of the *Soushay* was through Torres Strait, from the direction of Batavia to Brisbane. It included a round trip back to Amboina, in the Moluccas; then to Manila, Hong Kong and Saigon, Singapore, and back to Batavia. The experience on the *Soushay* gave the young seaman an intimate acquaintance with the Far East, a region that he was to know well in later years.

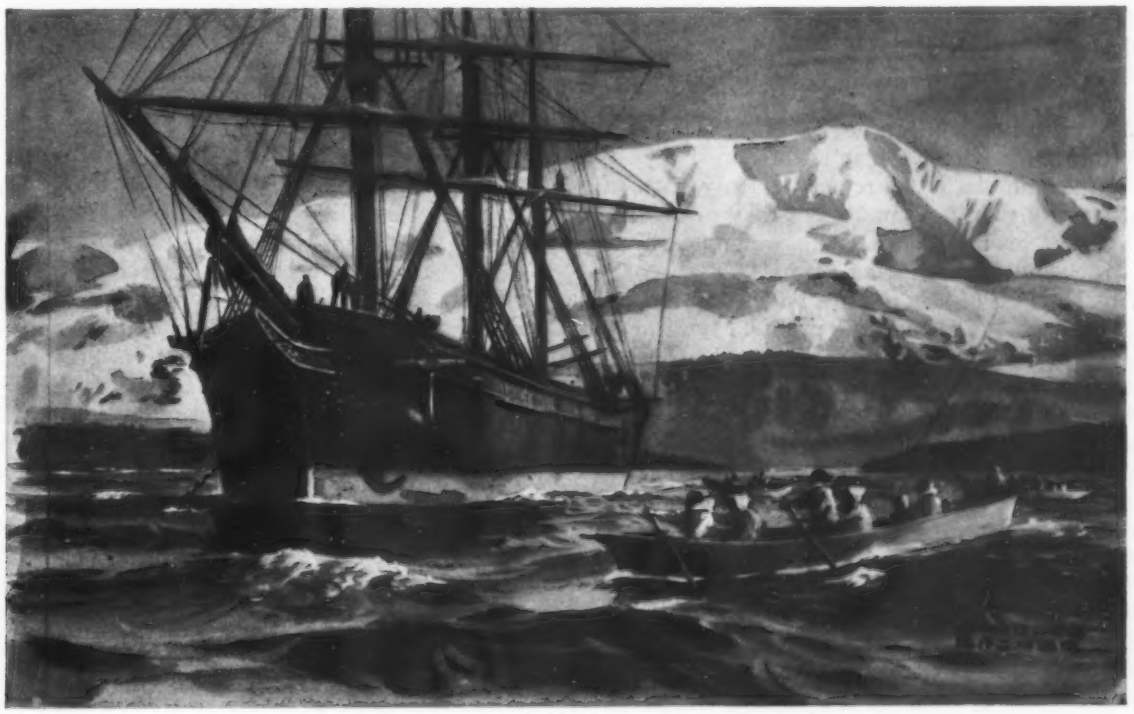
After two years of deep water, and while on a second voyage from Liverpool to the East Indies, Joshua received his promotion to second mate, at the age of eighteen. This he regarded as the most decisive step in his career. It was a graduation from the hardest school on the sea, and a recognition of his ability in seamanship and skill in handling men. During this period there existed, in British ships, a sharp line of demarcation between the foremast hands and the apprentices who were appointed by the company in consideration of a premium, and were, by the mere serving of time, destined to become officers. They were of the "brass-bound" and "cheesecutter" type, toward which he felt a mild contempt. He was proud of reaching the quarter deck through the hawsepipes and not through the cabin windows, and of having made himself in spite of adverse circumstances.

In our family album we had a tintype of my father taken in Liverpool at about this period, showing a husky youth with sharp eye and resolute bearing. He was rigged out in checkered flannel shirt and with trousers tucked into cowhide boots, the very kind used on the Bay of Fundy to this day. At that time he was already a second mate and, according to his own emphasized statement, he *was* a second mate, for hard-fisted men were then to be found on both ends of the ship, as well as good sailors. He weighed 180 pounds, had a will of iron, together with a natural aptitude for leadership. It is not difficult to see why he was placed where he was.

After rounding the Horn twice as Chief Mate on British ships in the coal and grain trade between Cardiff, San Francisco and back to Liverpool, my father decided to cast his lot on the Northwest Coast and to make San Francisco his hailing port with the view of obtaining command of a vessel under the American flag in the China trade, which he finally did. This was in the early sixties of the last century.

While ashore in San Francisco he fell in with the energetic, rough and ready life which still pervaded his adopted land. Everywhere about him there was enterprise and the foundations of fortunes were being laid with small capital plus great initiative. As compared with the East it took little capital to start in business. Here he met a Mr. Griffin who built gill-net boats for the salmon fishery on the Columbia River. Being something of a boatbuilder himself, and a draftsman as well, Josh became interested in the industry, little dreaming how far it was going to take him. Many of these boats were built at San Francisco, but a large number were also constructed on the Columbia River. He made a design for one of these boats, which was an improvement on the existing type, and this model was bought on sight by a cannery owner in Astoria who had boats built from it at his own establishment.

With few exceptions the boats were owned by the canners, and rented, with the nets, to the fishermen. My father decided to go in for the fishing, so he joined another enterprising spirit and, as all the boats were then rented, they determined to work the river and build a boat at the same time. This the partners actually did by borrowing a punt from which to drift their net while they worked at boat-building between tides. It was hard work, but they were equal to it. The boat proved a good job and sold for the market price at the end of the season. She is worth a word of description. A double-ender, carvel-built and fitted with a centerboard, her dimensions were, length 25 feet, beam 6 feet, depth 2 feet 6 inches. She was decked for about three feet at each end and had a washboard along each side. A



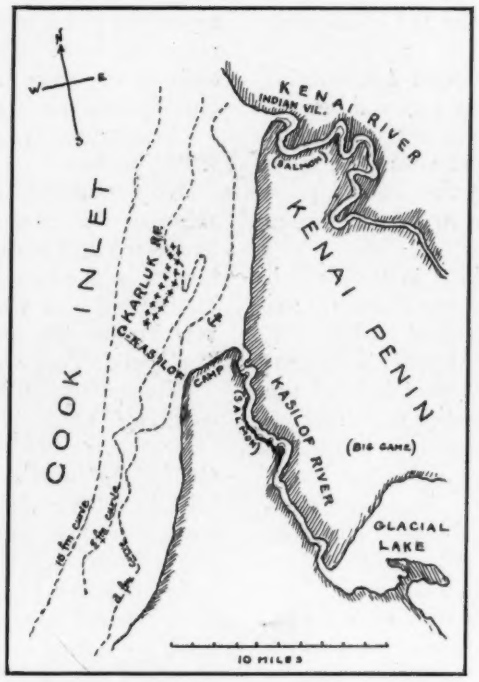
Bark "Washington," Captain Slocum's first important command, anchored in Cook Inlet, Alaska, in 1871

single 16-foot mast, to carry a spritsail, was stepped in the eyes of the boat, making her suitable for short explorations as well as for "shooting twine" on the river. With the mast for a ridge pole, the sail could be spread as a tent when the crew had to remain out on the river more than twenty-four hours. In such cases they would anchor their boat out of the way of passing steamers. Sometimes they would sleep in the daytime, since it often happened that they drifted all night with their nets. As they were always provided with an oil stove, a coffee pot, a slab of bacon, and a shot gun, the prospects were never bad.

With a good season's work on the salmon run behind them, including the proceeds of the boatbuilding venture, the partners next turned their attention to sea otter hunting at Gray's Harbor. At the time a considerable number of those valuable animals were shot in the surf off the beach by both white and Indian hunters, but they were becoming wary, and to make a hit the keenest shot was required. It took a number of tides to wash out the scent of a human footprint in the sand before an otter would dare to come out of the water. A large male otter is about four feet long. The pelt was valuable at any season of the year and brought from $50 to $350 on the market. Sea otter once had a range from Kamchatka to the southern extremity of Lower California. Its story is the story of the Russian settlement of Alaska and the earliest development of the Northwest Coast. China was the market for furs, and fortunes were made by traders from New York and New England, who rounded the Horn in small vessels, traded for furs on the coasts of Oregon, Vancouver Island or the Charlotte Islands, and then exchanged them for teas and silks at Canton. It was due to this trade that Captain Robert Gray, with the ship *Columbia*, discovered the great river and the important harbor which now bear, respectively, the name of his ship and of her captain. With the *Columbia*, Captain Gray finished his trading voyage, returning to Boston on August 10th, 1790, the first commander to take the American flag around the world.

My father kept a journal covering this period spent on the Columbia River, Gray's Harbor, Puget Sound, and British Columbia, but I remember only parts of it. It was wonderfully rich in accounts not only of his own camp life but that of his mates, with many references to the sea otter and the smaller fur bearing animals.

But the lure of this inshore adventure did not last long, though it was not without its profits. My father's real ambition was the command of a ship, which he had promised himself when first coming ashore in San Francisco. Resuming the sea, he was put in charge of a coasting schooner carrying grain from San Francisco to Seattle, with a return cargo of coal, produced from an inferior vein in that region. That was in 1869. This trade was something like the "coal out and grain home" voyages between Cardiff and San Francisco, on one of which my father first saw the West Coast. One of the first questions the owner of the schooner asked him when he applied for the berth was whether he had ever "carried grain." Yes, he had had "considerable experience with grain" but nothing was said at that time about Cape Horn.



Map of Cook Inlet, showing anchorage from which the "Washington" dragged ashore in a sudden blow and was lost

On the Coast the grain was carried as a deckload and to prevent this from becoming damaged or wet from spray required experience and care. By sharp application and observation, the peculiar knack of taking advantage of all weather conditions close under the land, was soon acquired by the Captain, who was always quick at learning a new technique. It meant constant vigilance and hard work. In two years of this employment he won the confidence of more important shipowners which was to lead to his later Pacific experiences.

Puget Sound always seemed to my father the most beautiful place in the world. There, Nature was in tune with human necessities and demands. Next to the scenery, and because he was always by nature a shipbuilder, the virgin forests of fir which grew to the water's edge attracted him. On the shores were sawmills with capacity for working out timber long enough to plank a ship from stem to stern without a butt. The shipways could be placed alongside of the sawmill itself, which resulted in great efficiency in handling materials. If a plank 200 feet long was required, it could be produced.

A number of vessels were thus built, on the edge of the Washington forest, including the bark *Washington* (332 tons) which became the Captain's next ship. In December, 1870, the *Washington* sailed from San Francisco for Sydney, Australia, with a general cargo. From there she was to go to Cook Inlet, Alaska, on a salmon fishing voyage. For this work the ship was especially provided with lumber and other materials for building boats and a camp, as well as with gill-nets, with which the Captain had become familiar on the Columbia. In fact, it was due to his experience there that he was selected for this expedition, making him one of the pioneers in that industry. At the time of the sailing of the *Washington*, Alaska had been opened up to Americans only four years although the value of her fisheries was already well known on the Coast.

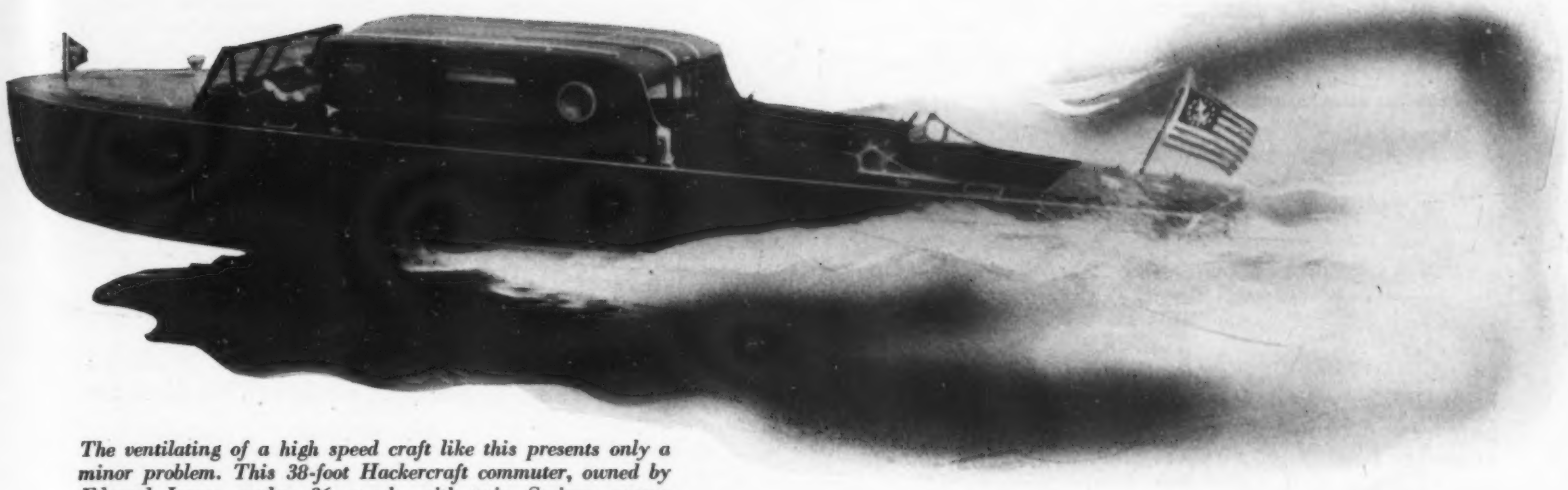
After arriving at Sydney the Captain made a number of friends in the American colony, and it was there that he met and married my mother, Miss Virginia Walker, a daughter of William H. Walker, formerly of New York. Though expatriated by distance, they were still thorough Americans.

On leaving Sydney for Alaska, my mother and her younger brother sailed in the ship. The latter was then a lad of twelve. I owe to him much of the detail of this voyage to Cook Inlet, which otherwise might have been lost. He said that it was the greatest experience of his life.

The Pacific is an ocean of great distances. Making allowances for sailing deflections caused by wind and current, it is nearly seven thousand miles from San Francisco to Sydney, and six thousand miles from Sydney to the Kasilof River, at Cook Inlet, Alaska. The track of the *Washington* was unusual, nearly north over both the North and South Pacific, the first part being through coral seas and among dangerous reefs of the Solomon and Marshall Groups.

On the way from Sydney the crew were kept at work making preparations for the salmon run, and as many of them as could handle axe or saw, turned to on two gill-net punts which were built as long and as wide as space on the

(*Continued on page 100*)



The ventilating of a high speed craft like this presents only a minor problem. This 38-foot Hackercraft commuter, owned by Edward Larry, makes 36 m.p.h. with twin Scripps motors

"Give Them the Air"

Something About the Ventilation of Engine and Living Quarters

By GEORGE F. CROUCH

ONE idiosyncrasy — I confess I should like to spell it "idiotsyncrasy" — of the average "salty" yachtsman which I neither approve nor admire is his mania to build and own a boat designed in all her essentials for deep water voyages during a North Atlantic winter and then to use her ninety per cent of the time for week-end cruises on Long Island Sound in summer. That could be endured if only he would refrain from asking his guests to praise her when he invites them to accompany him on a daring cruise to Lloyd's during a blazing hot week-end in August.

Even the horrors of the Spanish Inquisition were mild compared to the torture of a night in a narrow, deep, coffin-like berth in a two-by-four stateroom having for its entire air supply a four-inch ventilator supplemented by a couple of four-inch air ports. If only the boat had a decent cockpit or a spot of deck six feet by two feet unencumbered by cleats, chocks, blocks, hooks, slides or other gadgets, the sufferer below might go on deck with his blanket to fight with the mosquitoes for his share of air. My admiration is given to such an owner far more for his fortitude in using such a boat during our semi-tropical summers than for his daring and skill on deep water voyages, which, after all, is the real purpose for which the boat was designed and built.

Without decent ventilation, plenty of clean fresh air, and without proper screening, no boat is really fit for summer cruising in the waters of the United States. That a boat can be comfortable and at the same time seaworthy for coastal cruising has been proved by the growing popularity of the motor sailer type and by the increase in numbers of the bridge deck cruiser having a commodious deckhouse.

The basic principles in ventilating a boat are exactly the same as those used in ventilating a room, a train, or any other structure in which men live or in which machinery is installed. In the boat, however, all ventilation methods are complicated by the restricted space available for openings, for the installation of machinery to operate ventilating equipment, the limited power available to run them, their cost, and the absolute necessity of keeping water out of the boat, either flying spray or driving rain.

Two basic methods are employed in ventilation; one, a natural system, the other, a forced or mechanical system. When the natural system is used, natural wind and thermal currents due to temperature differences produce a flow of air through the interior of the boat. We often assume that a natural system will always be effective when a boat is under way. That, however, is far from being true. One of the most uncomfortable afternoons I ever spent was on the deck of a cruiser coming up Chesapeake Bay with a following breeze whose velocity coincided exactly with the speed of the boat. We might have run a mile or two slower or faster but that difference would not have been enough to be appreciable. What we did do was to run on our true course for as long as we could stand it, say about twenty minutes, then make a loop of generous diameter, grab a few breaths of fresh air when headed against the wind, with a moment or two of its invigorating effect upon our perspiration-soaked bodies, and then back upon our course again.

This is true not only of the motor boat but of sail as well. A long run dead before the wind on a hot July day is not conducive to comfort, to say the least. But under more favorable conditions natural ventilation can be effective when the boat is under way or when anchored in a moderate breeze.

Figure 1 is a diagram showing the approximate direction of the air currents as they flow over the deck and around the houses of the conventional small cruiser. It is a curious fact that the eddies over the deck and around the after bulkheads of the houses produce a flow often exactly opposite to that expected. Nine times out of ten, air will flow with considerable velocity into a cabin through a companionway at the after end instead of being drawn out of the cabin through this companionway. It is really the swirl over the cabin top and around the cabin sides, causing a big eddy, which reverses the direction of the flow.

In order to change the air in a cabin or in any space which is to be ventilated, an actual current of air must be set up in order to displace the air confined in the space. There must be both an entrance and an exit for the air. The flow of air around the cabin or even around the hull of the boat changes with the form and location of the openings and considerable

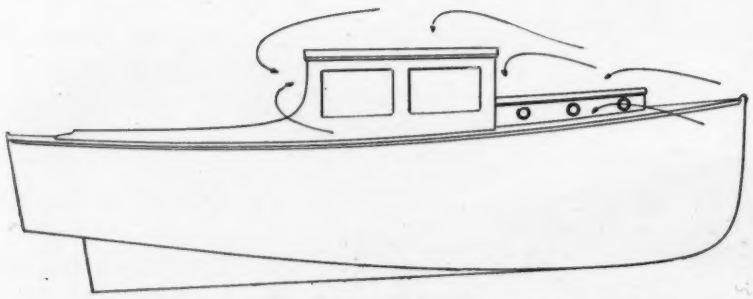
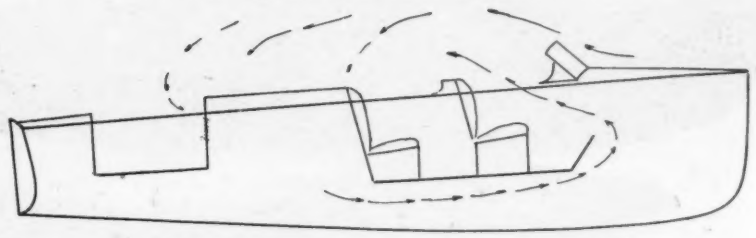


Figure 1. Air currents around a small cruiser. If the hull and house were truly streamlined the flow of air would be smooth and without eddies

Figure 2. Air currents around a runabout showing how the swiftly moving air deflected upward by the windshield draws the air from the motor compartment along under the cockpit floor and up past the helmsman's head



experimenting on the part of the owner is necessary before he finally finds out definitely just what ports, what windows, hatches and companionways must be opened to produce the necessary air current. Airports which are hinged either at the top or, much more commonly, on the forward side in order to deflect spray, are more effective as exhaust outlets than as intakes. To make them act as intakes in fair weather, the ports are opened to their full extent and air scoops — which look like sugar scoops without a base — are pushed through them and are turned forward or aft to catch the air or to exhaust it from the interior. If spray is flying, or if it is raining, they cannot be used.

On first thought the ventilation of a runabout would seem to call for no care whatsoever. That, however, is contrary to the truth. Air currents over and around the runabout are shown in Figure 2. Without exception the action of the windshield and cowl in front of the driver's seat produces an exhaust effect which tends to carry the smell and heat of the motor compartment forward under the cockpit floor and bring it up in the driver's face. Air enters the engine compartment most freely from the after cockpit. The little clamshell ventilators placed on the engine hatches over the motor are far more decorative than utilitarian. To some extent they do permit the escape of heated air arising from the motor when the boat is stopped after a run, but lifting the hatches for a few minutes is far more effective.

To stop the unpleasant flow of fumes and heated air under the floor to the driver's seat, it is necessary to fit a bulkhead which will cut off or greatly restrict such circulation. The ideal way would be to make a tight bulkhead just forward of the motor and provide a grill in the bulkhead at the after end of the motor compartment through which air enters.

When under way, any motor acts as a very effective air pump and in some cases the amount of air taken in by the motor is surprisingly large. This can be estimated very simply from the following formula:

$$\text{Cu. ft. air per min.} = \frac{25 \times \text{r.p.m.} \times \text{cu. in. piston displacement}}{100{,}000}$$

This is the value for 4-cycle motors. A 2-cycle motor uses 60 to 75 per cent more air for a given piston displacement. A 4-cycle motor of 1,200 cu. in. piston displacement turning 2,000 r.p.m. at full throttle will require 600 cu. ft. of air per minute. This would change the air in an engine room ten feet long, ten feet wide, and six feet high, once every minute — a far more rapid change than that laid down by any ventilation requirements in any type of building on land.

Unfortunately, the engine acts as a ventilating means only when under way, and engine compartment ventilation is most necessary before the engine is started. Gasoline vapors are heavier than air and always collect at the low points of the compartment. Unless some method is employed to remove them before the motor is started, a spark from the starting motor commutator or at the starting switch may cause trouble. The most dangerous period in the operation of a motor boat is when starting the motor. While the motor is in operation, its pumping action will ventilate the motor compartment.

A thousand and one devices have been produced to assist and speed up natural ventilation. In Figure 3 are shown a few of these. The cowl ventilator is either an intake scoop or an exhaust outlet depending on whether it faces into or away from the wind. Mushroom ventilators are useful chiefly on deck to permit the escape of heated air from beneath the deck but there is a slight exhaust effect when an air current blows over a mushroom ventilator. They never act as intake. The gooseneck ventilator is another outlet type. It is given this form to prevent spray and rain entering the outlet. Clamshell ventilators are intended to act either as scoops or as outlets, depending on whether they face into or are turned away from the wind. They have little effect because they are not high enough above the deck and are really useful to permit the escape of heated air. The revolving turbine head is a successful type and is employed to induce an upward draft from the quarters below deck. Heads of this character are found in many different forms, sometimes with and often without an auxiliary fan in the uptake, and are covered by many patents. The rotating head is always used as an exhauster. Actual laboratory tests by the United States Government and by various fire prevention bureaus have shown that some of these rotating head exhausters are quite effective in the lightest of breezes and will prevent the accumulation of gasoline vapor in the bilge while the boat is closed and lying at the mooring provided they are properly installed. If the head is located where it is masked by any of the deck structures, no one can expect to it be effective.

To carry air into the hull through a cowl ventilator and

(*Continued on page 104*)

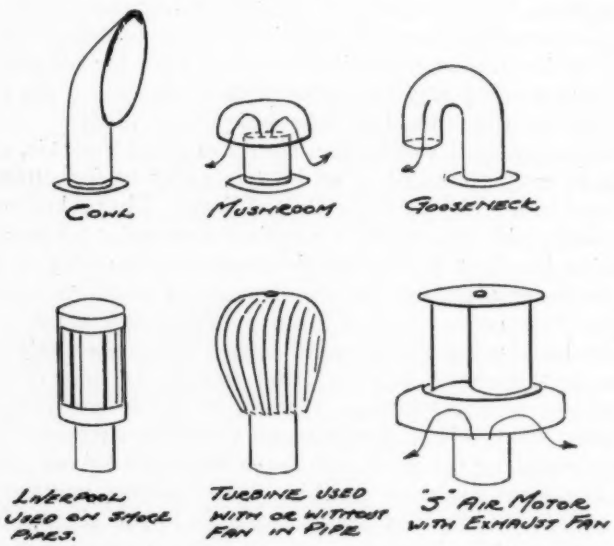
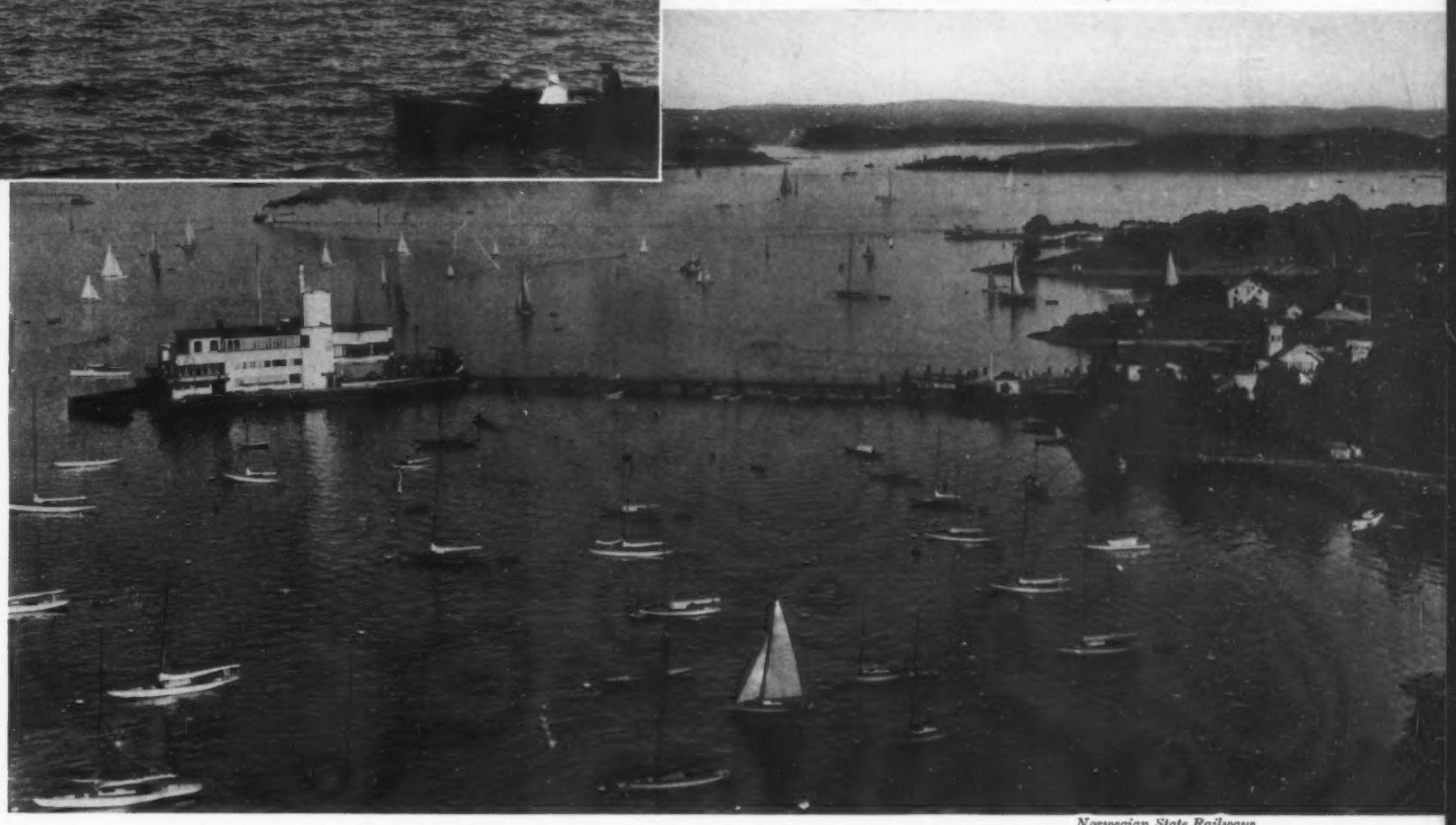


Figure 3. A few of the devices used to assist natural ventilation



The clubhouse and harbor of the Royal Norwegian Yacht Club, Oslo, where the crews of the ocean racers will find hospitality after their long passage of 3360 miles. Left, the probable finish line of the ocean race off Garnholmen Island, Oslo Fjord, near Hankö

Norwegian State Railways

All Set For Norway!

His Majesty King Haakon of Norway Offers Cup

WITH arrangements practically completed for the ocean race to Norway next summer, and inquiries coming in from many owners of ocean going yachts relative to entering, everything is set for the first event of this kind ever to be sailed from the United States to a Norwegian port.

The Cruising Club of America and the Royal Norwegian Yacht Club (Kongelig Norsk Seilforening) will handle the race jointly. The secretary of the latter organization writes that His Majesty King Haakon of Norway has graciously offered a cup to be sailed for, which will go to the winner on corrected time. The course from Newport to Hankö (Oslo), where the race will finish, is about 3360 miles.

The race will be sailed under the rule of the Cruising Club of America, as published in the February, 1935, issue of YACHTING, with time allowances based on the N.A.Y.R.U. tables.

The following are the principal conditions, so far agreed upon.

Start. Newport, Saturday, June 8th, 12 noon.

Course. Brenton Reef Lightvessel, Newport, to the Island of Garnholmen, off Hankö, Norway (or possibly Bergen); yachts must pass to the north of Scotland.

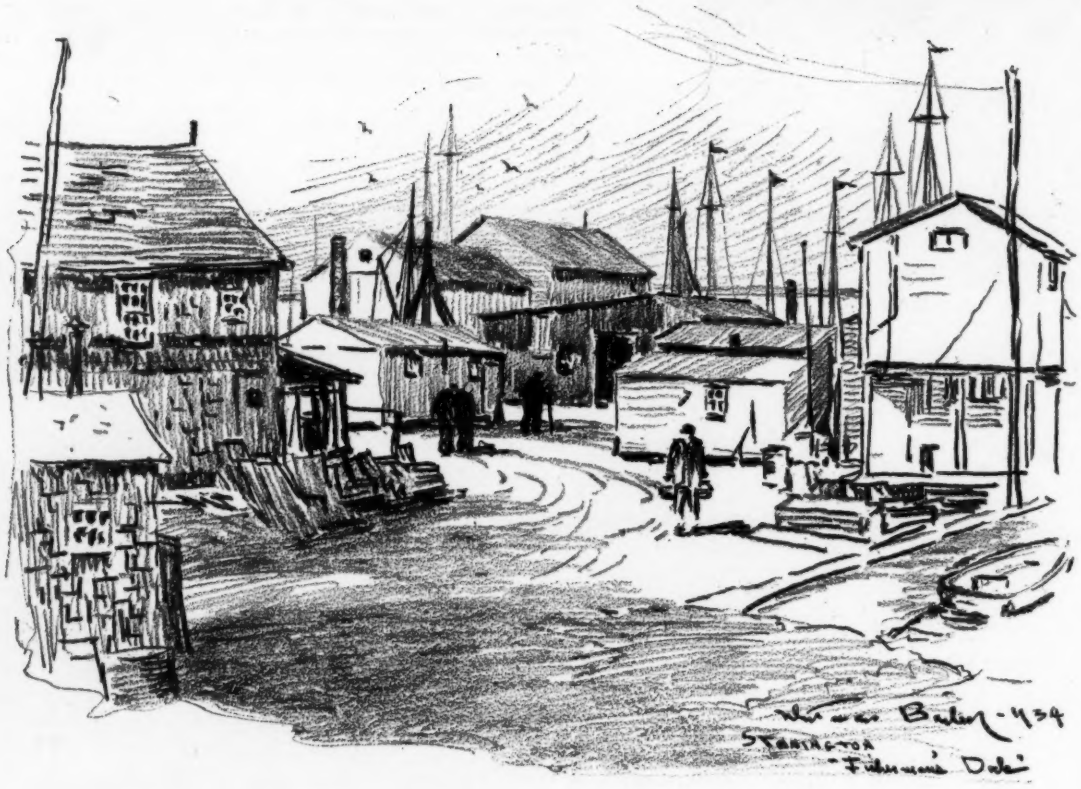
Class and Size. Yachts of all rigs will sail in one class. To be eligible yachts must be not less than 45 feet nor more than 72 feet in length over all. Yachts must be of a thoroughly seaworthy type with enclosed cockpits, and the combined length of forward and after overhangs shall not exceed one-third of the yacht's over all measurement.

The race committee of the Royal Norwegian Yacht Club which will handle the finish consists of H.R.H. Crown Prince Olav, Magnus Konow and Oluf Höy.

An international regatta will be sailed off Hankö from July 4th to 7th, and the ocean racers should arrive in time to participate in or witness this event. It is probable that the Royal Ocean Racing Club will arrange a race from Oslo, or some other Scandinavian port, to Cowes the latter part of July, for which the American yachts will be eligible, and the Fastnet Race will start from Yarmouth, Isle of Wight, on August 10th.

Already one entry from Norway has been received, the 24-ton *Sandefjord*, owned by Erling Tambs, who a few years ago sailed the *Teddy* from Norway to Australia. American entries which seem assured are the ketch *Vamarie*, Vadim Makaroff; the schooner *Mistress*, George Roosevelt; the yawl *Stormy Weather*, Philip LeBoutillier, and (probably) the schooner *Brilliant*, Walter Barnum. There will be others. It is possible that the British cutter *Jolie Brise*, now owned by Stanley Mortimer, of New York, will be entered, and negotiations for an entry from Germany are in progress.

For information address Race Committee, Cruising Club of America, 135 William St., New York City.



Fisherman's Dock at old Stonington, where both yachts and fishing boats often congregate and where stories are still told of the whaling industry

The quiet waters of the Mystic River, Connecticut, emptying into Fisher's Island Sound, have for many years been a haven for yachtsmen

Old New England Harbors

The Pontoon Yacht "Witchcraft"

A Radical Experiment With a Catamaran Type

By GEORGE C. and S. W. WHITING

NCE in every so often, yachtsmen half heartedly pick up the age-old catamaran type, and try to make it work as all the evidence says it ought to work. Then, after costly encounters with the usual difficulties, the type is put to bed to hibernate for another generation.

About two years ago, one of these waves of interest in multi-hull craft seemed to be gathering unusual weight and to show unusual promise. Now, as the wave of interest recedes, the impression is left that there are "bugs" in this type, as indeed there are.

Witchcraft, the subject of this article, is not strictly a catamaran nor a proa. She is the final outcome of paper work and of a series of experiments with models extending through the past year and a half. The model, executed in detail to half-inch scale, has been tested in salt water, over courses of considerable length, and under severe conditions. Her performance, and her apparent ability to overcome inherent catamaran faults, have been sufficiently impressive to warrant the building of a full size boat which will be tried out this summer.

Most catamaran enthusiasm starts with a consideration of the aboriginal catamarans and proas of the South Pacific. While I have been unable to find any accurate data as to their design, it is a fact that their performance was remarkable. These crude canoes — fashioned, as a rule, from logs — were fast and smart on the wind, even as judged by modern standards, and they made regular voyages of hundreds of miles over nasty stretches of water. Unfortunately, could they be reproduced, they would not fit our present needs. Yet they offer a challenge to our school of design that is hard to dodge.

What has been learned about catamarans on Long Island Sound and off Marblehead during the past two years? From this near at hand experience we can adduce a list of virtues and vices that seem inherent in the true catamaran. Their chief virtues are listed below.

1. Various catamarans about 30 feet long, with about 1000 square feet of sail, have logged better than 20 knots.
2. The superstructure upon which the crew is carried does not pitch or roll, but remains almost level regardless of what the pontoons are doing.
3. This superstructure, or platform, offers enticing possibilities for luxurious accomodations.
4. The boats are of light draft, and stay right side up when aground.
5. Sail can be carried without any *ballast to counteract the heeling effect of the wind on the sail.* The significance of this fact deserves enlargement, as it constitutes the great appeal of the multi-hull type. Weight is as much the enemy of bodies floating in water as of bodies floating in air. Few yachtsmen stop to consider the price that must be paid for the weight of ballast. From an abstract point of view the cost of a pound of weight is still greater weight, in the form of heavier construction to carry this added weight; a reduction of the limit of speed; an impairment of the hull's seaworthiness, regarded purely as a floating body; an increase in the labor of handling and, quite important, a marked increase in cost.
6. Catamarans sail faster on the wind than before it.

Now let us list catamaran vices as we know them.

1. They have a most disconcerting tendency to nose dive, or pitchpole, to combat which no technique of handling is wholly effective.
2. They do not choose to come about.
3. To minimize the pitchpoling tendency, the *C.E.* has to be kept low. This results in a sail plan of poor aspect ratio and in a superstructure kept so close to the water that the average harbor chop must wash over it.
4. Worst of all is the fact that, if two hulls are harnessed together in any manner that prevents their independent response to the water in which each floats, severe stresses may be set up on the connecting joints. There is no existing double hull craft with which I am familiar, which entirely eliminates this sort of stress, or is designed to support it under really severe conditions.

Bearing in mind the *pros and cons* of the catamaran, let us proceed to take a look at *Witchcraft*. Figures I and II show the general layout of her pontoons, leeboards, superstructure, etc. There are *three* hulls or pontoons, arranged like the runners of the forward steering iceboat. The main pontoons are aft and steering is done only from the forward pontoon. These pontoons are held in formation by attachment to a high-standing superstructure — but of that more later.

Fore and aft stability is had from the support of the forward pontoon, working through the long leverage of the backbone. Transverse stability is secured, first, by spreading the main pontoons much farther apart than usual. This is possible because of the support of the forward pontoon.

It naturally occurs to one that the superstructure is greatly extended and must add unduly to displacement; this is true to an extent, but there are certain compensations. With a true catamaran, or two-hulled craft, the superstructure must be flexible, and must withstand severe stresses. With a three-hulled craft, the superstructure has no tendency to distortion from a vertical movement of its corners and can be made light and rigid. This whole system lends itself to the simplest and most ideal sort of bracing. Every stress and twist can be taken squarely on the chin.

While no figures concerning comparative weights are available, it is my guess that weight added by extension of a cross member and the backbone, involved in a three-hull design, is more than offset by the weight made necessary for strength in a four-point flexible two-hull structure.

Aside from spreading her feet apart, *Witchcraft* has incorporated other available aids to stability. Considerable experiment with bottoms that skid *up* to leeward, and tops that blow *down* to windward seems to suggest the adoption of such bottoms and tops on a ship like *Witchcraft*. (Proper salutes are here fired for the designer of the Elco Sail Plane, Fiji Island proas, and others who have utilized the above principles with great ingenuity on different types of craft.)

In Figures I and II, you will notice two dagger boards (*D*, *D*) hinged at their tops. Their angles of depression are controlled by radial braces (*E*, *E*) leading to the center of the cross member. These radial braces screw in and out much like the machinery that pushes the lead in and out of your pocket pencil; thus the boards may be adjusted to any desired angle and held rigidly.

Normally, when on the wind, the boards toe in. The angle at which they toe in is adjusted to fit the weather, but the effect, to a greater or lesser extent, is this: in a too severe puff the boat is allowed to skid rather than heel. Bearing in mind the three-point plan, it is clear that the result is a slight luff. Further, the boards, being pointed towards the center, have to some degree this effect: the lee board tends to plane *out* while the weather one tends to dig *in*. The net effect depends, of course, on the angle of the boards and the leeway permitted. The hulls are "geared to the water."

Aloft, a similar or, more properly, the opposite effect is achieved. The accompanying photographs show two struts or whiskers across the cat-walk and a third strut between the shears. These are all travelers upon which not only the booms but the stays swing. Coming about, the canvas pivots from the fixed central point aloft but the foot swings bodily to leeward, like the end of the boom.

The effect of this is to incline the whole canvas somewhat "kitewise." Thus a certain part of the wind pressure can be resolved into vertical *lift* to leeward — in fact, as much or little as one desires, depending on the angle of incidence. On *Witchcraft* this angle can be regulated through the play allowed on the traveler.

Utilizing the combination of these features, it is clear that a multi-hull craft can be designed with the minimum limit of displacement and still have little or no tendency to capsize. In fact, it would be quite possible to design a craft with a tendency to capsize to windward! I have watched one of our models do it.

So much for stability. The matter of independent hull action, which is so necessary to a seaworthy catamaran, becomes a simple problem with three hulls.

Witchcraft's three hulls are attached to the superstructure in this manner. At its three corners, or extremities, the superstructure has perpendicular "legs" which are rigidly braced into the general framework. The foot of each "leg" is attached by a universal, or ball and socket joint, to a certain point on the keel of the hull. This point is chosen a trifle abaft the Center of Buoyancy of the normally floating hull, a trifle below the Center of Gravity of the entire hull, and considerably ahead of the Center of Lateral Resistance. There is no other permanent attachment whatsoever between hulls and superstructure. The boat is steered by a rudder on the forward hull actuated by yokes to the steering-head, or forward "leg."

The results of such a hookup are apparent. The superstructure itself, being suspended upon three points, can suffer no tendency to distortion, and each hull is as free as it would be on a tow line. Such weight and pressure as may be communicated to each hull is placed precisely where it is wanted.

Now, as to the seaworthiness of *Witchcraft*, let us consider what can damage her. Admittedly, three entirely decked-over canoes, with ballast in their bottoms, would come scatheless through a storm that might founder a battleship. But, you point out, these canoes are linked together and they must tear themselves apart. What, then, will tear them apart? The force of the waves? Remember, that so far as floating bodies are concerned, the force of a wave is measured not by its weight or velocity, but by the weight and (perhaps relative) velocity of the object opposing the wave.

Thus, since each of our hulls is free to respond to its individual water, the maximum stress that can be placed on the joining structure is readily approximated by the stress that would, under like circumstances, be put on a mooring or a tow line for each hull. Possibly, the gooseneck of the main boom is more than amply strong to serve as the universal joint that holds the pontoon. If the craft cannot be wrecked by the tearing apart of the joints, how else then?

It has already been observed that catamarans do not float their hulls in the same water. Their superstructures, however, while spanning the intervening water, do float in the same water as that on which the hulls are floating. Hence, if the superstructure is too low, or the intervening water too high, there must be serious trouble. With *Witchcraft*, since the height of the center of effort need not be worried about, and since no mechanical difficulties offer, the superstructure can be placed almost anywhere you want it. Of course, with a three-hull system this spanning-the-water point must be considered not only with regard to a beam sea, but also with regard to a head or a following sea.

How high must we build our superstructure to keep out of the wet? What we are interested in is not how big a wave can be (how high and how long) but merely what shapes water can achieve inside the perimeter of a triangle 50 feet long and 32 feet broad.

Let us consider, then, what we know of the behavior of the sea. Fortunately, on this subject there is more available and accurate data than on catamarans. As this is, perhaps, the determining factor in the seagoing multi-hull equation, I think it deserves a separate, if brief analysis.

Generally speaking, and off the beach, there are two types of waves — the trochoid, and the cycloid.

The cycloidal wave form, Figure III, is peculiar to relatively shoal water and represents the steepest form to which a true wave can be built up without breaking. The trochoidal wave form is that of the great waves off soundings.

Although I have found no data on the subject worth quoting, there is another form — properly speaking, not a wave — which, nevertheless, is a most important condition of water, so far as small boats are concerned. That is, the behavior of surface water. It may be occasioned by the conflicting wakes of passing steamers, by fast currents against uneven bottom and heavy wind, or by numberless freak conditions, and it occurs habitually as an adjunct to the crests of all large waves. This sort of water can assume any shape, and conforms to no rule. Lacking any information on the subject, it is my experience that this unaccountable type of water does not exceed three feet in height. With regard to cycloidal waves, which from our point of view are the worst to be encountered, the length-height ratio is 5:1 minimum, 30:1 maximum, average 17:1.

Witchcraft covers the water over a triangle 32 feet wide and 50 feet long. Taking it fore and aft, according to the worst recorded gospel, there should be a frame clearance of 10 feet. Athwartships, there should be a clearance of 6 feet 4 inches.

I have laid out *Witchcraft* with a superstructure six feet above the water line, which gives sufficient clearance to keep the vital parts of the ship out of water in the steepest sort of sea. To be sure, when sailing with or into such a sea a part of the backbone might be in the wave crests, but that part is only the middle of what is, in fact, a glorified bowsprit, supported at both ends. If experience requires it, the superstructure of *Witchcraft* may be arched and kept clear of any conceivable sea.

With main pontoons free to swing to their own courses, another catamaran fault is eliminated. The craft will come about, and as readily as one of the hulls would alone.

The design of *Witchcraft* is only half explained without some mention of her rig. The rig resembles that tried, with some success, on an English racing dinghy. It was called, I believe, a Bi-plane Rig, which is as good a name as any other. With variations, it happens to fit the unusual requirements of *Witchcraft*.

The sails are set to shears and are fixed to roller stays for reefing and furling. The rollers are hollow, faired spars. So far as I can learn, the roller jib has two major "outs." It calls

for a flat cut sail and a heavy, rigid stay. In our case a flat cut sail is needed, to fit the higher speed conditions, and a rigid stay (*i.e.*, a spar) is required if the sails are to be self-tending when coming about. Thus, we have ideal conditions for roller sails in their most convenient form.

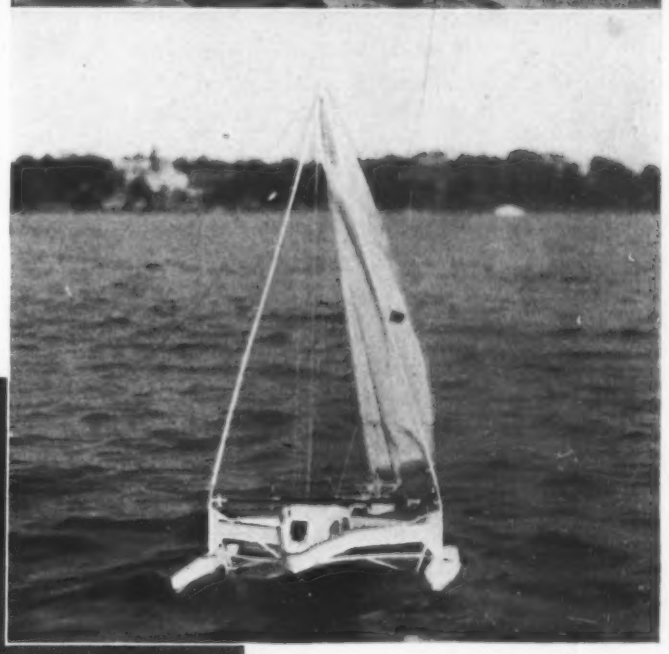
All this, one might think, adds unduly to weight aloft. True, but it is not so bad as appears at first glance. Shears have considerable inherent stability, and with two hulls to span they take their thrusts to the natural points of support, instead of thrusting as a mast would, in the center of a bowstring, so to speak. The structure being naturally strong, it is lighter than might be expected. As for the spar-stays, they are admittedly heavier than the wire stays, bolt ropes, halliards, and hanks which they displace, but not so much heavier.

Anyway, and here is a rather surprising point to bear in mind, with *Witchcraft* weight aloft acts only as just that much weight on the bottom of the hulls.

Continuing to the next peculiarity, there are three athwartships travelers, the after one extending the full distance between the main hulls, and the two forward ones successively shorter. On the forward traveler is a sliding sleeve connected by a toggle (to compensate for the arc of the swing) to the rigid jibstay.

The midship traveler is of square section and carries a free sliding sleeve surrounded by a drum. The sliding drum, with proper fairlead, serves as a winch to handle the short wire jib sheet, and has a simple remote control, which revolves the traveler, handled from the sail tender's station on the bridge. Straddling this sliding sheet drum is a wishbone-like toggle, also free sliding, to carry the staysail stay.

The after slide, which traverses the bridge between shears like a ridge pole, also carries a sliding winch drum arranged like that on the midship traveler. This is for the main or staysail sheet, and is directly operated by a hand wheel at the port end,



Mildred Holt, Boston

Top. A number of models of the multi-hull type have been tested under sail in varying conditions of wind and sea. Judging by the wave formation, this model was traveling at a good pace

When "Witchcraft" comes about the foot of each sail shifts to leeward on travelers. The luff of each is laced to a spar and a wishbone club extends the clew. Shear legs take the place of the mast

"Witchcraft" has three hulls and a long superstructure supported by them. Each hull is connected to a vertical leg by a ball and socket joint. The forward hull is the only one with a rudder

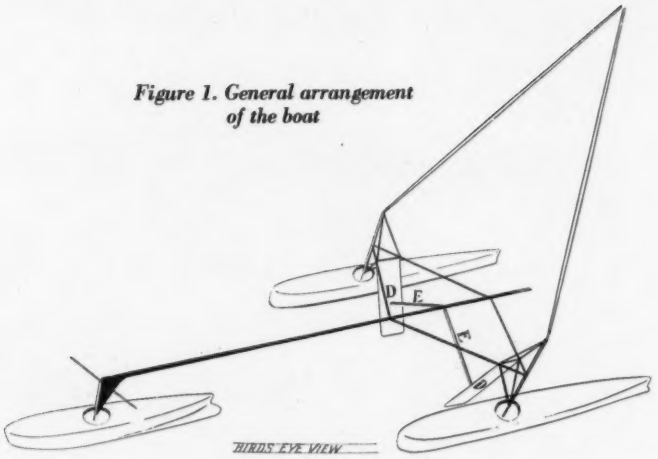


Figure 1. General arrangement of the boat

just beside and above the jib sheet control wheel. Both of these winches are fitted with ratchets, ratchet releases, and brakes.

Both sails, by the way, have wishbone sprits instead of booms, hung on topping lifts at both ends, and thrusting against a saddle at the fore end.

The after ends of the sprits, to which are attached the sheets, are approximately on the same level as the slides. In trimming sheets when sailing close hauled, one is amazed to find how easily they come, since there can be no more strain on the sheet when close hauled than when sailing before the wind. To appreciate the advantage of this rigging one has only to take a stern view of conventional craft sailing on the wind with sheets laced in and note that the sheet appears almost perpendicular to the deck. This shows that almost the entire strain on the sheet is tending *not* to draw the boom in, but to poke the mast through the keel and to part the headstay. Why subject the rigging to such futile and needless stress, not to mention the poor devil tending sheet? On *Witchcraft*, no such tendency develops, and if the flow of the sail needs adjustment it is easily regulated by the outhaul and, perhaps, by an adjustment of the sprit angle.

The fundamental advantages promised by the multi-hull type have been mentioned: greater speed, especially on the wind; improved seaworthiness, with comfort; easier handling; far lower cost for a given amount of accommodation and performance. While it is true that no one craft of the multi-hull type has yet offered the combination of these merits, it is equally true that every one of these virtues has been demonstrated, individually, by catamarans and proas. That their combination is not beyond hope of accomplishment is indicated by the performance of *Witchcraft's* model.

It would be a pity if the wave of catamaran enthusiasm manifested in the last two or three years were to recede without leaving more than another mark on the sand. Actually, a great deal of valuable, if sporadic and uncodified, data has been gathered. Impressive exhibitions of performance have been witnessed. We must admit that the picture of a 30-foot catamaran, with about 1000 square feet of sail, costing about $5000, handled by two men without much effort, and sailing under conditions comparable to those obtaining during the recent America's Cup races, sailing on the wind at a speed a quarter again as fast as any Class J yacht ever sailed, is impressive! Such performance is doubly impressive if one remembers the exploits of craft of similar type sailing from the Ladrones and the Fiji Islands as far as Honolulu.

As has been stated, the performance of models of *Witchcraft* indicates that the amazing ability demonstrated by catamarans can be combined in one craft. Also, the known "bugs" to which the catamaran is prone are shown to be eliminated.

Incidentally, *Witchcraft* possesses a host of minor qualities that are decidedly pleasing. In conclusion, let us examine a few of them.

Those who have sailed catamarans will be pleased to know that she comes about on a dime. Each pontoon, being free to take its course unhampered by the others, comes about as smartly as a 32-footer can be made to. In effect, three boats merely come about simultaneously. Further, there is no chance of getting in irons. Put *Witchcraft* dead into the wind. Headway checks, and she gathers sternway almost at once. With the rudder shifted for sternway, she swings into whichever tack you choose and gathers headway on the new course without delay.

With only about two tons displacement, heavy anchors and ground tackle are not required. And these light anchors are handled even more readily than on conventional boats. The hawse pipes and winch are located on the spine a bit abaft the stern of the forward pontoon. Anchors and chain

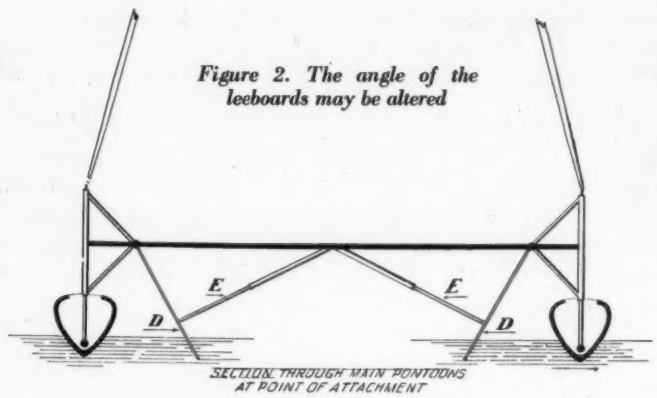


Figure 2. The angle of the leeboards may be altered

never have to be taken aboard, which not only saves work but keeps mud and gurry off the decks.

Not only can the ship be brought about and maneuvered smartly, but she tends to hold her course when left alone. The reasons for this are evident. For one thing, the center of lateral resistance remains fixed between the fore "leg" and the "legs" of the main pontoons, regardless of what the hulls are doing. Thus, the perfect balance can be calculated,

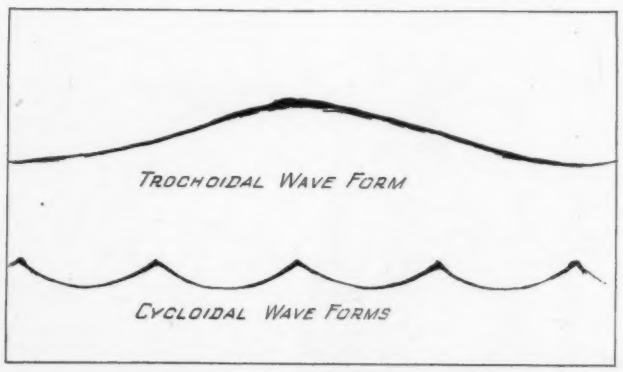


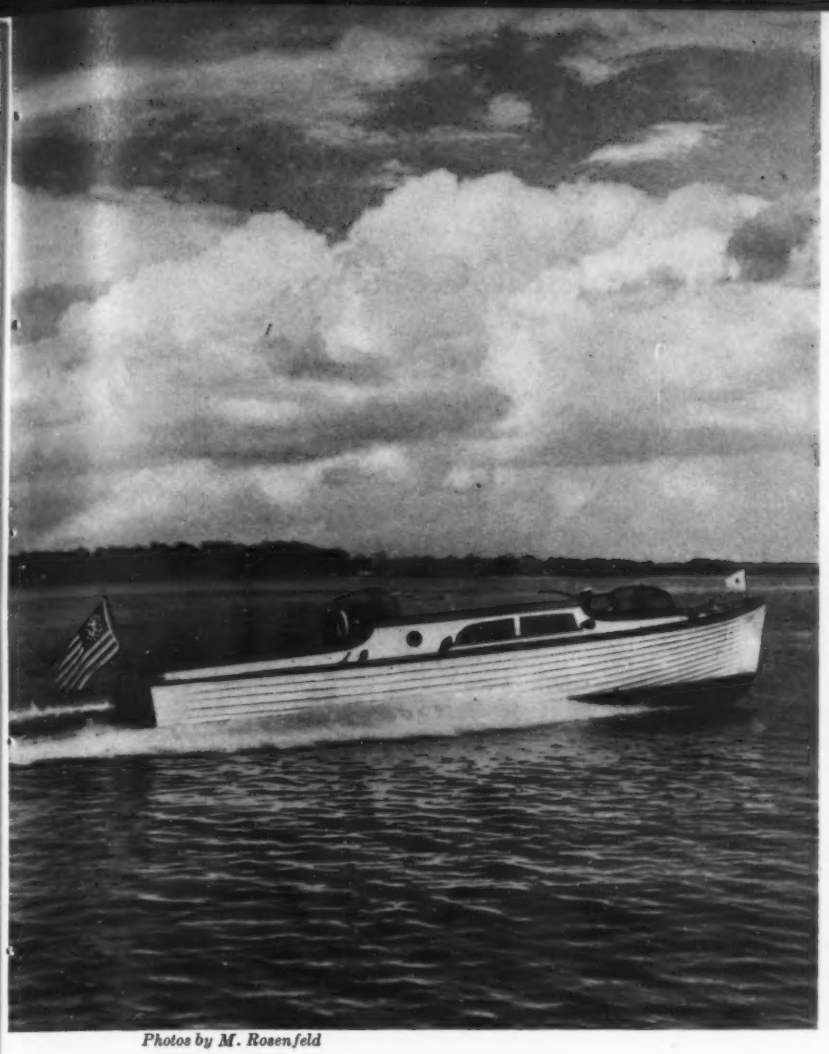
Figure 3. A comparison of wave forms. The trochoidal wave is found offshore while the cycloidal outline develops when the water shoals

with the assurance that all vital centers will stay where plotted, under all conditions. Furthermore, a glance at the craft is enough to show her inherent directional stability. The forward, steering pontoon works through the very long leverage of the backbone. And as for the effort of steering, remember that one is only turning the rudder of a 24-foot canoe.

So much for this rather sketchy preview of *Witchcraft*. It is expected that, before the end of the summer, a description of her actual behavior will be available.

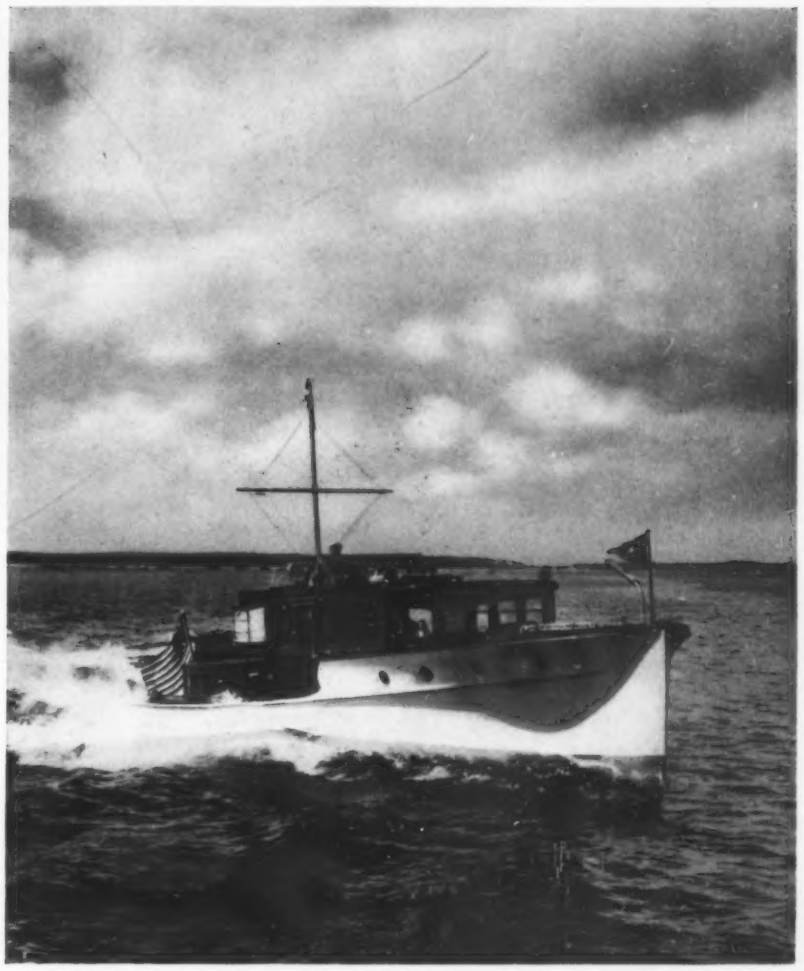
Sunny Days Afloat

"Lazybones" is a modern example of the Jersey sea skiff. She is a 38-footer, designed and built by Hubert S. Johnson Boat & Engine Works of Bay Head, N. J., and her power plant is a Hall-Scott



Photos by M. Rosenfeld

Right. "Akela III," owned by E. I. Low of Lawrence, L. I., was designed by Chris B. Nelson and built last season by George Lawley & Son Corp. She is 53' length over all, 12' 10" beam, and 3' 9" draft. Two 6-cylinder 5½" by 7" Hall-Scott engines furnish the power



Below. G. J. Easton's twin screw cruiser "Gee Jay," now cruising in Florida waters, is a product of the Consolidated Shipbuilding Corporation. She is a 40-footer and is powered with a pair of 100 hp. Speedway engines

On the Gulf Coast

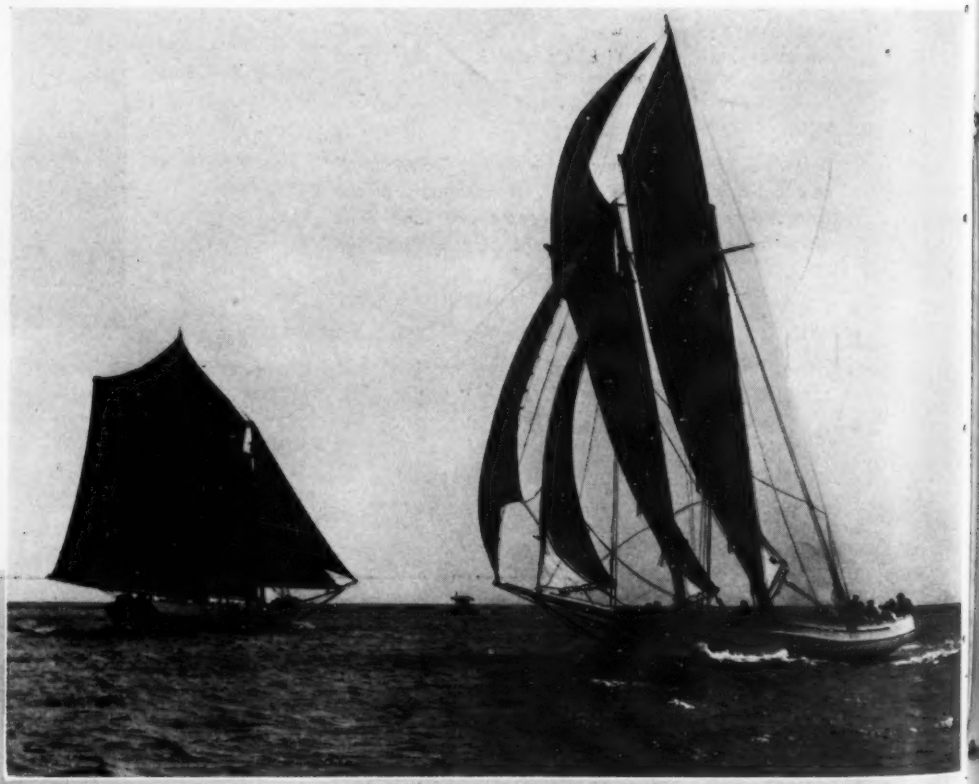
Left. The winner drifts across the line and lets go her anchor at the finish of a long distance race staged by the Gulf Yachting Association

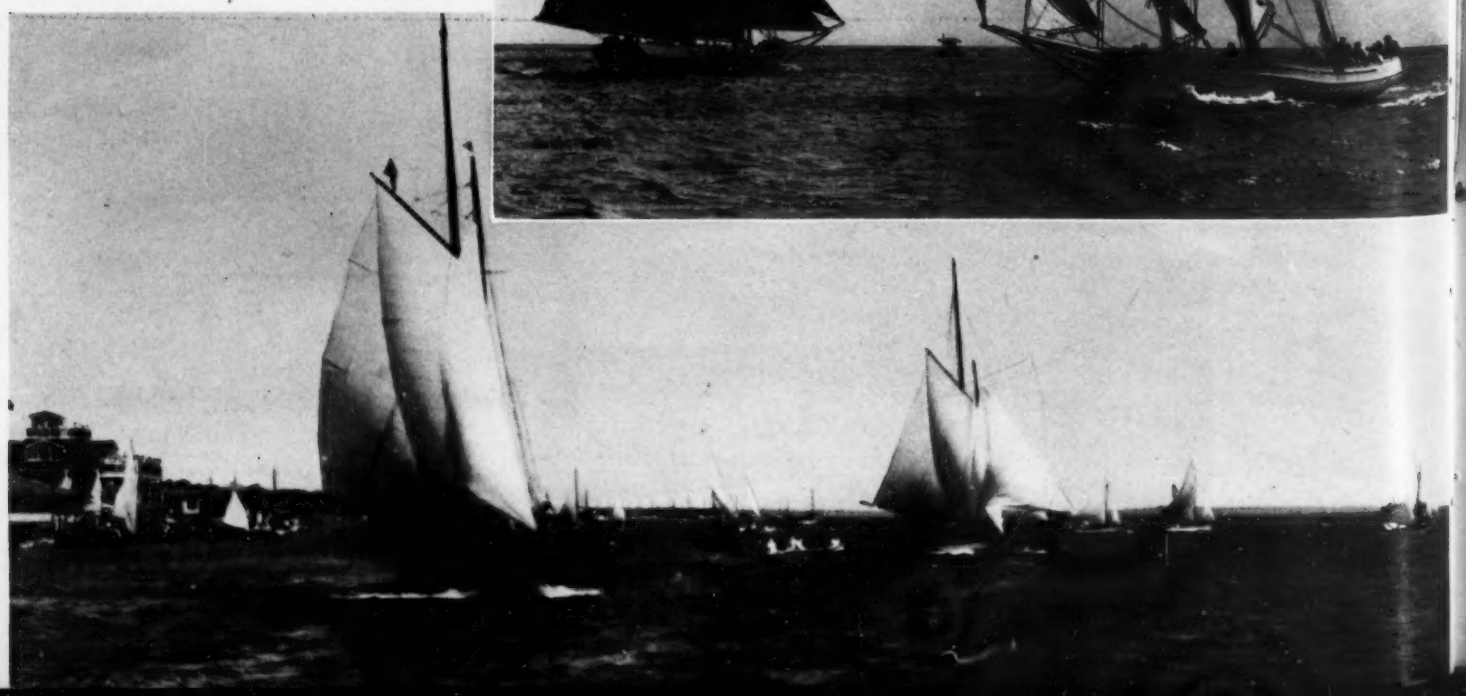
Right. One of the charms of Biloxi's water front. A fishing schooner silhouetted against a sunset sky

Below. Biloxi fishermen meet for their annual regatta and race their schooners as keenly as any Six-Metre enthusiast

Bottom. Start of the schooner class in Biloxi's annual regatta. In the foreground is Commodore Gardner Tullis' "Windjammer," of the Southern Yacht Club

Photographs by Anthony V. Ragusin, Biloxi





On the Building of a Yacht

By

HENRY B. NEVINS

THE desire which urges a man or a woman to own, navigate, sail or steer a boat, in fair weather or foul, over a kindly or angry sea, with a leading or adverse wind, is a dominant one and not to be denied. Nothing is so satisfying to the primal instinct of a red-blooded man for adventure, as matching his intelligence and brawn against the elements and bending to his purposes nature's dynamic power. This may he do with his boat.

Does it not follow that the vessel, which is so much a part of this adventure, should receive from her owner the most minute care and attention, that he should become attached to her, know all about her, and that, unless he does, the maximum joy of using her will not be his?

If perchance this article may bring to you some added knowledge and a full appreciation of how a boat is and should be built, somewhat of her care and, what is probably a problem not often considered, the relationship of owner to crew and yard and why these relationships are most important to the eventual good of the sport, it will have served its purpose.

What follows applies, in general, to the building of both power and sail boats, with notations here and there where special features pertain only to one or the other.

In proposing to have a boat built for you, the first step is to have plans drawn by a naval architect, setting forth the shape, the interior arrangements and the scantlings, which mean the size of the various members in the boat. Many times the designer will consult with the builder as to sizes and kinds of material; sometimes he will not, and many a builder has been blamed for a poor boat when he had nothing to say as to what and how much material was to be used.

Preliminary Work

After obtaining the plans, the first step towards building is "laying her down and picking her up." This means that the plans are reproduced full-size on what is known as the mould loft floor, which is nothing more than a big drawing board. From these full-size plans are made templates and moulds for lead keel, stem, deadwood, the various members that go to make up the backbone of the vessel, and also the station or cross section moulds, which together reproduce the hull form as designed by the architect.

Lead Keel

After the moulds have been made, if the yacht is to be a sail boat, one of the first steps is the casting of the lead keel. This may vary in weight from perhaps half a ton to seventy-five tons, in the case of "J" boats. Keels are of intricate shapes, and great accuracy is demanded. Lead weighs something over 700 pounds to the cubic foot and, if the keel is not accurately drawn and figured by the designer and faithfully reproduced by the builder, its weight may be way off from the intended figure and the performance of the boat be seriously impaired.

The keel mould is a hollow form, usually made of wood, the inside of which is shaped to form the keel casting in accordance with the design. A thin coating of whitewash or plaster brushed on the wood, or even ordinary chalk rubbed on it, will prevent the melted lead from burning the wood to any extent that would be detrimental.

In the past, the method of melting the lead was rather crude, as the yard workmen used to gather all the accumulation of waste lumber, put the pigs of lead into a big iron pot and build a bonfire around it. When the lead was melted, a gang of men with long-handled ladles would, in succession, dip into the lead pot and pour into the mould. A tedious and, believe me, hot job.

Nowadays, the lead is melted by oil torches in a pot set higher than the top of the mould, and run into the mould through a pipe. In some yards, though, the old method is still in vogue.

A lead casting cools and solidifies rapidly on the outside, while remaining fluid in the center for some time. This requires careful manipulation, or hollows will occur in the center of the casting, which subtract from the desired weight. Furthermore, when the boat is hauled out in the winter, water becomes imprisoned in such a void and freezes. After several years this will cause a large bunch or blister to appear on the surface of the keel.

Many designers require that the entire amount of lead used for the keel be melted. It is infinitely better, with the modern method of pouring, to fill the mould partially with pig lead and run the melted lead in between the pigs. This fuses the entire mass and obviates, to a great degree, the tendency to produce voids in the center of the keel.

Iron is sometimes used for a keel in place of lead. It weighs much less per cubic foot than lead so that the weight cannot be concentrated as low, which is detrimental to stability and tends to increase the wetted surface of the boat. It is a definite factor in setting up galvanic action (of which more later) and is not to be considered at all in a racing yacht. From about five tons and up, it makes a cheaper keel than lead. If you are going to run your boat on rocks, its hardness will enable you to get off much more easily; and it has been claimed that, due to its greater bulk, the weight is not so concentrated and the boat will have an easier motion in a seaway.

Wood Keels and Framing

Having the templates from the mould loft, we are now ready to fashion the backbone of the boat from them. Keel, deadwood, stem, stern, etc., are each cut and finished to the proper size and bolted together. The lead keel is bolted on, and the whole is set up on blocks and adjusted to the plans.

Then, the cross section, or station, moulds are set up at the proper intervals on the keel, and are connected together by ribbands run fore and aft. One can now get an idea of the shape of the boat. The section moulds have been so made that the inside surface of the ribbands is the outside surface of the frames.

The floors, made from mould loft templates, are now shaped and fastened to the keel. They are important members of the boat's construction, as they tie the heels of the frames together and provide the means of holding the wood keel and the lead keel to the body of the boat. They also help to prevent distortion from wringing.

Next, the frames, or ribs, are put in a long box into which live steam, under very little pressure, is admitted, and the

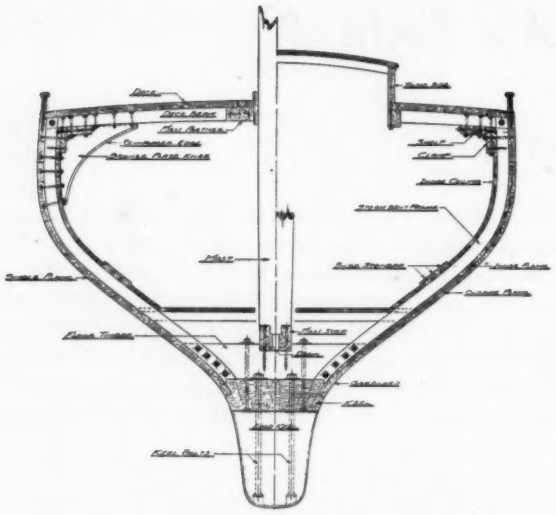


Figure 1. Sections of a well-built sailing yacht, showing the construction at the mast and also in wake of the cabin trunk. The planking on the left is worked in a single thickness while the section on the right shows double planking

frames are heated and softened for bending. The steaming time is an hour to an inch of thickness. Each frame is then bent over moulds to the required shape, fitted inside the ribbands and temporarily fastened, ready for the planking.

Planking

The first planks to be put on are the upper, or top strake, and the garboard, or plank next to the keel. They must be tapered, laid fair with the run of the boat, and the seams beveled to receive caulking. The last plank to be put on is known as the shutter, and is located somewhere in the middle of the boat's girth.

If double planking is used, it consists of two thicknesses, one laid on top of the other, each seam of the outside layer coming in the center of a plank of the inside layer. The two thicknesses are fastened together with screws or rivets and some substance, such as thick shellac, paint or varnish, is placed between the layers to insure watertightness and strength. No caulking is used. Double planking is essential in many power boats, especially those of the high speed type, where extreme lightness and strength of hull is demanded and where the dimensions of framing and backbone are reduced to the minimum.

Double planking is desirable in many sail boats and most power boats on account of its strength and because one plank is laid tight against its neighbor with no caulking or putty in the seams, thus making a fine smooth hull. The chief objections to it are that it is expensive, costing about 75 per cent more than single planking, and it is difficult and costly to repair in case of severe accident. Wherever possible, the outer skin should be only slightly thicker than the inner, though in planking of less than one inch total thickness this is not practical as the first essential is that the outer skin must be adequate to hold the fastenings to the frame.

There are no better plank fastenings than wood screws. They are better than rivets, nails or spikes. The holding power of a rivet depends on the burr riveted on the inner end. Wood, because it has a tendency to shrink, leaves the burr loose and the fastening pulls until the burr fetches up again. The plank is then loose from the frame and the rivet loose in the wood. But don't ever let anyone put a galvanized iron screw in your boat anywhere. Such screws are no earthly good. The galvanizing clogs the threads and tears the wood as it is screwed in. If the electro-galvanized screw is used, rust will eat it up in short order.

An old fashioned Swedish iron nail, galvanized, is an excellent fastening, and will last as long as anything, but the frame must be of suitable size and each fastening be bored for so that the nail will not split the wood when it is driven in. They are hard to get and the common commercial boat nail is made from impure iron which rusts easily.

A galvanized steel wire nail is next to nothing; it will not hold and it will not last.

Caulking

Now let me speak about caulking. The average yacht owner does not realize the importance of this, nor the care with which it should be done. Much of the strength of the boat is derived from the caulking, to say nothing of the necessity of caulking to keep water out. When properly and tightly driven into the seams, it binds one plank to the other and prevents their rubbing by each other when the boat is being driven hard. It may be of cotton, which is used by itself

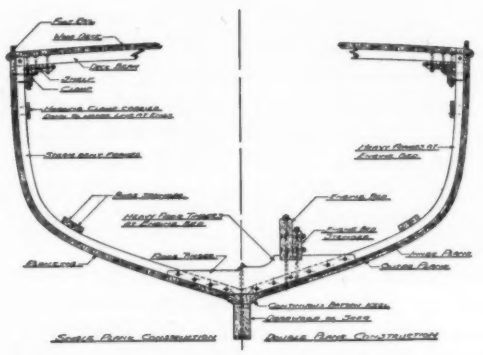


Figure 2. The various members of a well-built motor boat, including the engine beds. Single planking on the left, double on the right

in light boats, or, in heavier boats, of oakum, with a thread of cotton. Cotton being non-absorbent, is more watertight, while oakum packs and binds better when the seam is large enough.

Caulking should be driven in neatly, smoothly and tightly but not too tightly, or it may result in what is called "wooded" seams. This will cause the caulking to loosen quickly and the boat to leak. Lord help the next man who tries to caulk! A caulking seam should be wedge-shaped, open on the outside and tight on the inside. A "hollow" seam, as one is called which is more open inside than out, is hopeless. After a seam is caulked, it should be payed with paint or varnish and filled in with putty, marine glue or some of the special compositions made for this purpose.

Up to the time of the completion of the planking, the shape of the boat has been preserved by the section or station moulds, but it is now necessary to remove these to put in clamps, shelf, bilge stringers and the interior joinerwork or cabin partitions and floor.

Temporary braces are put in at the proper points so that the form of the boat is retained.

Clamps and Shelf

The clamps and shelf are longitudinal members of the structure, located nearly at the sheer line, to which the ends of the deck frames are attached. It is important that long bolts, with nuts accessible from the interior of the boat, be used to fasten the clamps and shelf to the deck frames and the timbers of the hull. After a year or so of use, these may be tightened up. It is of great importance that this should be done, as it adds a great deal to the life of the boat.

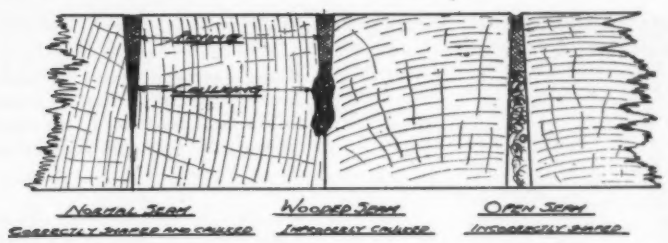


Figure 3. Good and bad workmanship in fitting deck planking

Bilge Stringers

Bilge stringers are longitudinal members located usually just below the turn of the bilge and designed to stiffen the hull at the point where, if grounded and heeled over, it would fetch up on the bottom.

Ceiling

Ceiling may be described as planking inside of the frames. Its purpose is to strengthen and stiffen the boat and it is a powerful factor in so doing. In larger boats, for service which requires maximum strength, it should be caulked.

Importance of Fitting and Fastening

There are two facts that every yacht owner should remember: first, that the strength and life of his boat depend primarily upon the careful fitting together of all the members of the hull; (all surfaces in contact should lay fair and tight together) and, second, that the fastenings which hold those surfaces in contact must be properly selected and put in to afford the greatest strength attainable.

Aside from the selection of material, which we will discuss later, these two factors make the prime difference between a good boat and a poor one, between a resilient, responsive hull and one which will work, wring and leak.

Having installed the clamps and stringers, the deck beams are put in and the deck is laid and caulked. By this time, the interior work such as bulkheads, partitions and furniture, should have been made. To facilitate handling, it is usual to install this, also the tanks and engine, before most of the deck frame is put in.

Different Types of Frames

We have been talking about boats built with steam bent frames which, without doubt, is the best type of frame up to four inches in size. There are two other forms of construction which may be used, composite, and sawn built-up double frames. Both of these have their disadvantages.

In the composite type, the frictional bond between metal and wood is not as good as between wood and wood; there is difficulty in getting the plank fastenings to fit tightly in the holes in the frames; corrosion is serious, and galvanic action is apt to attack the fastenings. Also, it is more difficult to obtain a fair boat.

With the sawn double frame, there is the disadvantage of extra weight, bulk (which interferes with room inside the boat), and the fact that the wood, not having been disinfected by steam, is more liable to rot. In the past, when crooked oak was easily obtainable, it was possible to build up a fairly good frame, as the joints could be located at will and would not come at the same distance from the keel in adjoining frames. At present, only straight grained material is used and joints have to come in pretty much the same place in each frame. It must be remembered that every joint is a potential hinge, and it is not good practice to have the weak point in successive frames at about the same distance from the keel, especially when an engine bed is located beyond the ends of the floors and right at the first hinge in the frame. It is no wonder that an engine so placed shakes and moves from side to side.

Mast Steps

Mast steps are most important; they should be of ample length, well-supported on the floor timbers, and attached to the frames. There is a downward thrust of tons on the mast; the boat being more or less wedge shaped at that point, this pressure has a tendency to cause the planking seams to open. If your boat leaks under sail and not at anchor, get your floor boards up some time when sailing in a heavy breeze and see if the water is not coming in under the mast. You will find, in the majority of cases, that it is. Some time when you have your mast out, look in the mortise into which the keel fits and see if it is drained. A half-inch hole in the bottom of this may save you hundreds of dollars in repairs. If this step mortise is not scuppered, water, from one place or another, will get in there and stay, and a more fertile focal point for rot cannot be found.

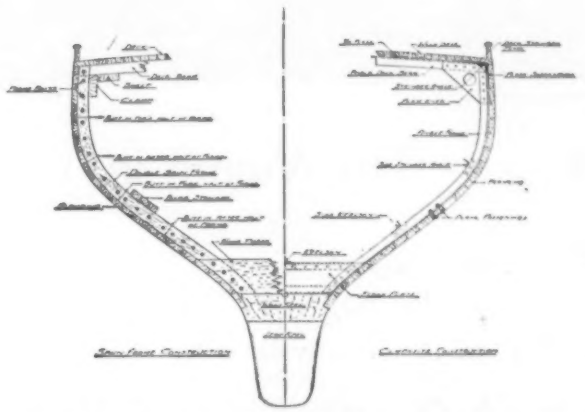


Figure 4. The section to the left shows a boat with sawn double frames, while composite construction is shown on the right

Concerning Rot

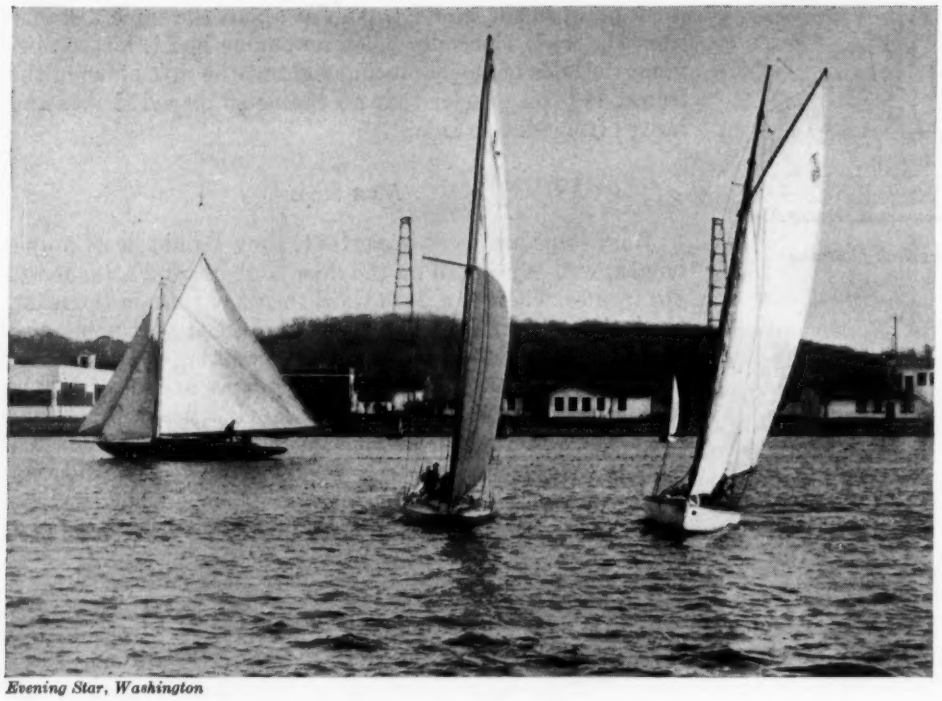
In speaking of places vulnerable to rot, the bow and stern stand out predominantly. The two chief causes for the rotting of these members are lack of ventilation and leakage of fresh water through the deck.

It is hard to make tight, and still more difficult to keep tight, all the members that come together at the ends of a boat. Look over all the joints, at the bow and stern, and be sure they are tight. If you have a bowsprit, take it out every year or so and be sure that the seams underneath are not leaking. If there is a constant drip of fresh water inside, between the planking and the stem, and inside the stern, rot will most certainly develop. Ventilation should not be interfered with by bulkheads, partitions and structural members. Sometimes, a couple of small ventilators are advisable, especially near the stern. The chief cause of rot is alternate wetting and drying in a place deficient in ventilation.

Extra Strength at Vital Points

Hanging knees, extra heavy frames and deck beams are necessary at the points of concentrated stress, especially in

(Continued on page 106)



Evening Star, Washington

Where extremes meet. "Black Hawk," an old Class Q yacht, "Brangler," bilgeboard scow, and "Kittywink" racing on the Potomac

H. Martyn Baker's new 10-foot Class D dinghy, built by W. J. H. Dyer from designs by P. L. Rhodes

Weesman

The Month in Yachting

Sailing Revived on the Potomac

SAILING on the Potomac River at the nation's capital took on a new aspect last fall when a group of zealous yachtsmen revived sailing races after a lapse of over thirty years. In spite of this long lapse, the first season was a remarkably successful one.

The Potomac is not an easy place to sail, and racing is even more difficult. The channels are narrow; buildings, trees, and hills deflect wind currents, and intersecting stream currents tend to hinder the sailor engaged in competition.

The Potomac River Sailing Association was organized and the first race was sailed on October 7th at the Corinthian Yacht Club with seven starters. This showing was due principally to the untiring efforts of Grover Farnsworth of the Old Dominion Boat Club, Alexandria.

Eight races were sailed on alternate Sundays, from both clubs. From a beginning with four small sloops, one tiny cat, and two 25-foot cabin cats, the association fleet grew to twenty-five yachts of all sizes and classes, from an old Eight-Metre, a "Q" boat, and a Class L bilgeboard scow, down to a couple of dinks. Because of the variance in size and type, the necessity for a handicap system at once became evident. Successful time allowances were worked out, based on past performance.

Racing will be resumed early in the spring and will continue as long as the wind holds, with more racing to come in the fall.

Even in the early stages of the organization, one-design racing was suggested. As previously mentioned, no two of our boats are of the same class. Through the efforts of Verner Smythe, of the Capital Yacht Club, plans of the 16-foot Comet Class boat were obtained, and the president of the Comet Class Yacht Racing Association, Dr. John Eiman, gave his hearty support and coöperation in organizing a fleet. The result is that five Comets are now under construction by sailors from the Capital Yacht Club. It would be impossible to establish one-class racing immediately but, before two seasons are over, Washington will probably have a sizeable fleet of Comets racing on the historic Potomac.

The results of the first season were announced at the final dinner on December 5th, at the Old Dominion Boat Club. High score trophy went to *Kittywink*, the Eight-Metre yacht skippered by Frank B. Levy. *Brangler I*, a bilgeboard scow sailed by C. E. Turney, captured the cup for the best time made by any boat.

Anyone owning a boat in the vicinity of Washington and Alexandria is urged to enter these races. Information may be secured from Robert Menzel, 2951 Tilden Street, Washington, D. C.

The point scores of the leading boats follow:

Boat	*Owner*	*Type*	*Points*
Kittywink	Frank B. Levy	Eight-Metre	5200
Peter Pan	Grover Farnsworth	16′ Keel Sloop	5000
Brangler	C. E. Turney	Bilgeboard Scow	4700
Wild Cat	C. Y. C. Sea Scouts	25′ Cat	4000
Bob Cat	C. Y. C. Sea Scouts	25′ Cat	3900
Brangler II	Adrian Gilbert	Bilgeboard Scow	3900
Louise	W. C. Mitchell	17′ C. B. Sloop	3600
Black Hawk	Geo. Jensen	Class Q	3500
Sea Bird	Verner Smythe	Yawl	2900
Kittywake	B. S. Drane	Ches. Bay Cutter	2800
Naomi	Robt. Gates	Ches. Bay Canoe	2800

WARREN C. MITCHELL

Centenary Celebration at Martha's Vineyard

THERE have been so few opportunities for Americans to celebrate a hundredth anniversary of any form of sport, and pay tribute to its founders, that the race next August off Martha's Vineyard which will commemorate the centenary of yacht racing in America which was initiated in this country by John C. Stevens of New York and Robert Bennett Forbes of Boston, should attract wide interest and many contenders.

It was a singular coincidence that these two men, one of whom, Forbes, had just organized the first yacht club in the country, which undoubtedly inspired Col. Stevens to launch the New York Yacht Club a few years later, should have encountered each other on the schooners *Sylph* and *Wave* off the southerly end of Cape Cod on August 3rd, 1835.

Instead of passing with a wave of the hand or perhaps a dip of the flag, they both hauled up and engaged in a smart brush, or what they called a "trial of speed," which lasted a number of minutes. *Sylph* kept on to the westward, and *Wave*, which was bound to Nahant, turned back for Holmes' Hole, where *Sylph*, which had been aground in Wood's Hole, found her the next day.

Another brush then took place. Under the lee of West Chop, *Wave* drew away, but out in Vineyard Sound, with more wind and some sea, *Sylph* gained and was not far astern when they both anchored in Tarpaulin Cove. In the second race Commodore Forbes was a guest on *Wave*.

Accounts of both races were printed two days later in the *New Bedford Gazette* and reprinted in the *Boston Transcript*, together with another from a Boston ship news reporter, who claimed that *Sylph* had the better of both contests. But Commodore Forbes was a good sport and readily admitted in a letter to the *Transcript* that *Wave* won both contests, although in his little brochure "A Discoursive Sketch of Yachting Forty or More Years Ago," which he published in 1888, he says that *Sylph* was gaining in both when the trials ended.

The Centennial Race of August 3rd and 4th will be under the management of the Southern Massachusetts Yacht Racing Association, with the start off Nobska late in the afternoon when the tide turns west. The course will be around Block Island in either direction and the finish at the Edgartown bell buoy, a distance of about 110 miles. The material incentives will be a trophy given by the Stevens and Forbes families, medals to all crews that finish and, as the contest will be a sweepstake, $10.00 a boat, a chance for cash return in the division of the purse on a 60, 30 and 10 per cent basis.

The cruising rule of the New Bedford Yacht Club will be used. Entry blanks may be obtained from Secretary Edward A. Norman, 60 Beaver St., New York, after April 1st.

W. U. SWAN

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Race to Halifax Discussed

DOWN in Nova Scotia they've been talking recently of staging a race from Boston or Marblehead to Halifax, and the suggestion is one that ought to strike fire. Several yachts of the Cruising Club cruised to Nova Scotia in the summer of 1927, but the only races that have been run to the maritime capital were the successful ones of 1906 and 1924. With the racing spirit already stimulated by talk of this year's event to Norway, there is every reason to believe that owners of cruising boats who can't afford the time for the Transatlantic jaunt will be interested in the Halifax race. So far the matter hasn't progressed much beyond the talking stage; but Ed Kelley, of *The Halifax Herald*, writes that that paper has offered a trophy and that the Royal Nova Scotia Yacht Squadron is prepared to time the finishers and to give all American visitors a hearty welcome. This is easy to believe, as there were several contingents of Nova Scotians at Newport last fall watching the Cup races, and it was remarked of them by all observers that they can sail boats and speak the lingo.

The new auxiliary yawl "Belisarius" just before she left the builder's yard at Bristol on January 25th, with the mercury at zero. At the left, the traditional bottle is being broken on her bow as she starts to move down the ways. Top, left, Nathanael Greene Herreshoff, her designer, and Commodore Charles B. Rockwell, Jr., her owner

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Chesapeake Bay Yacht Racing Association Organized

CHESAPEAKE BAY, one of the most active centers of small boat racing in this country, is now to have its yacht racing activities coordinated through the Chesapeake Bay Yacht Racing Association, the organization of which is now being rushed to completion.

Headed by Henry DuPont Baldwin, of the Hampton Yacht Club of Hampton, Va., and R. Hammond Gibson, of the Chesapeake Bay Yacht Club, Easton, Md., the new association will attempt to eliminate conflicting racing dates, assist local regatta committees which desire help, encourage Corinthianism on the Bay, and generally unify activities.

One of the most important objects of the new association is to foster junior sailing. As a starter, a new one-design crabbing skiff, similar to many used locally around Oxford and St. Michaels, has been designed by R. Hammond Gibson and Lowndes Johnson, creator of the Comet Class sloop and former International Star Class champion.

The new boat is a 16-foot sailing skiff so simple in design that it is expected many of the boys will be able to build her for about $25.00, while local shipyard costs are not expected to exceed $50.00, complete with sail. These little craft are to be the feeders which will help to man the larger yachts on the Bay and insure a continual supply of helmsmen.

The clubs which make up the association at this time are as follows: Gibson Island Club Yacht Squadron; Chesapeake Bay Yacht Club, Easton, Md.; Maryland Yacht Club, Baltimore; Corinthian Yacht Club, Philadelphia; Hampton Yacht Club, Hampton Roads, Va.; Miles River Yacht Club, St. Michaels, Md.; Chesapeake Bay Log Canoe Assn., St. Michaels, Md.; Chester River Yacht & Country

Club, Chestertown; Tred Avon Yacht Club, Oxford, Md., and Elk River Yacht Club.

In addition to Chairman Henry DuPont Baldwin and Secretary R. Hammond Gibson, the other organizers of the new association are Herbert Griffith, Jr.; Rear Commodore Hynson Rogers, of the Corinthian Yacht Club; C. Judd Stewart; William H. Henderson; Bennett Kolbe; Dr. William T. Hammond, and Philimon Wills.

The association has joined the North American Yacht Racing Union and will work closely with it in unifying local regatta committee procedure. The activities for the first year will be confined to strengthening the racing programs of the member clubs and to assisting local race committees in handling the large entry lists which the numerous invitation regattas on the Chesapeake attract.

The International Star Class fleets on the Bay are working closely with the officers of the Chesapeake Bay Yacht Racing Association to unify the 1935 sailing schedule, as Star boats are sailed by nearly every club on the roster of the Association. This season's program is to be so arranged that the elimination series to pick contenders for the International Championships in California will be followed by a series of local regattas. The Chesapeake Lipton Series will again be handled by the race committee of the Chesapeake Bay Yacht Club, as will the J. Graham Johnson Memorial Trophy series. Star fleets in the Association are the Chesapeake Bay, Eastern Shore, Hampton Roads, Elk River and Delaware River.

C. E. LUCKE, JR.

Charles Robert Patterson, well known marine painter, sketching on the Farallon Islands

Charles R. Patterson

THE readers of YACHTING are familiar with the paintings of ships and the sea by Charles R. Patterson, which we have been privileged to reproduce from time to time in this magazine, the most recent being those showing South Street in the days of the Cape Horn trade. Yet but few of those who know and appreciate Mr. Patterson's work know the man himself. Though they realize from the accuracy of his drawing and his vivid and colorful portrayal of sea and sky that he knows sailing ships as but few know them today, not many are aware that Mr. Patterson was a sailor long before he was an artist, which accounts, perhaps, for the fact that his ships and his sea make such a strong appeal to sailors. He sees them both through the eyes of a seaman. Most marine artists of today, however well they know the sea, and paint it, have acquired their knowledge of sailing ships at second hand. Not so Mr. Patterson, for he followed the sea from the age of thirteen until, some fifteen years later, the urge to paint what he saw and felt drove him to leave it in order to study the technique of painting, first in San Francisco, and later in the East. That he did so was to preserve for posterity the sailing ship as she appeared and appealed to the hardfisted, iron-hearted yet sea-loving men who sailed her.

The son of a British shipbuilder, Charles Robert Patterson developed an instinctive love of the beautiful iron square riggers in whose creation his father had a hand. At an age when most boys were in form schools he made his first voyage in the four-masted British ship *Kentmere*, an extremely lofty vessel. During the nineties of the last century and the early nineteen hundreds, he followed the sea in deep

Ray Chapin

Two dinghy divisions and the Rainbow Class compete every winter week-end in races sponsored by the California Yacht Club

water ships, some of those in which he sailed being the old British iron bark *Alexandra*, the American wooden vessels *James Drummond*, *Coloma* and *Compeer*, and the Hawaiian steel ship *Hawaiian Isles*, now the Swedish training ship *Abraham Rydberg*. In them, he sailed to all parts of the world. Later, he acquired experience, as an observer, in the steam whaling operations of the North Pacific, and he happened to be present at the wreck of the *S.S. Valencia*, with heavy loss of life, in January, 1906, on the west coast of Vancouver Island.

Believing that first-hand knowledge is vitally important, Mr. Patterson made a number of trips to the Banks with the fishermen of Gloucester and Nova Scotia, back in the days when sail was still a factor, and was present at the earlier races for the International Fishing Schooner Trophy.

Since the square rigger, as an instrument of commerce and a breeding ground of seamen, has now passed away, we are fortunate in having a great artist who knows them so thoroughly that his portrayal of them is meticulously accurate.

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Northwestern Ice Yacht Regatta

THE annual regatta of the Northwestern Ice Yachting Association found suitable conditions on February 4th, but after the first day a heavy snowfall covered the smooth ice, making sailing difficult. However, a strong wind during most of the races enabled the more venturesome pilots to settle championship matters for the year. Because of the snow, class titles went to the winner of two out of three races instead of three out of five events as heretofore.

In Class A, competition among 350-square-footers resulted in Fred Jungbluth's Four Lakes Yacht Club entry *Fritz* capturing the "A" boat honors for the second year. Sailed by Carl Bernard, the *Fritz* stayed well in front of a fleet of eight and proved her superiority both on smooth ice and in the sluggish going. She covered the 12-mile course, in her best race, in 41 minutes and 40 seconds, more than three minutes ahead of O. Lyman Dwight's forward-steerer, *Marcia II*, which finished second in three races. Louis P. Simon's *Running Wild* was third.

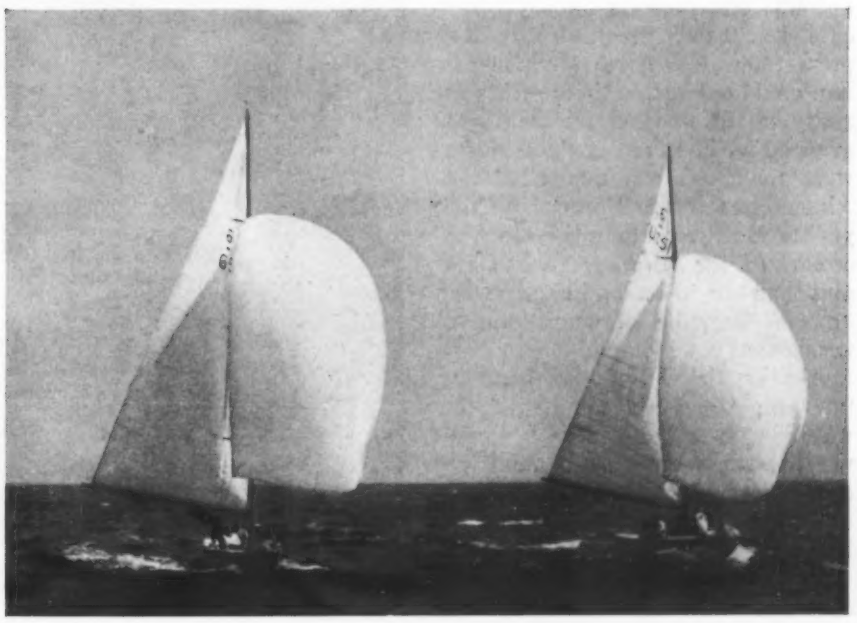
In the first day of racing Starke Meyer's *Paula V*, a bow-rudder flier, outsailed her only competitor, the *Donnie D* of Oshkosh, owned by Joseph Dichtl and sailed by Edwin R. Friedrich. *Paula V* was doomed to inactivity in the following Class B events by reason of lack of snow runners, with which *Donnie D* was equipped, and the latter twice sailed the course alone to claim the 1933 B championship.

A feature attraction of the regatta was the astonishing snow performance of the Skeeter Class, the newly formed division for 75-square-footers, all of which are front-steerers. In a field of ten, the majority hailing from Beau Skeeter Yacht Club, Lake Geneva, Wis., Harry Melges took the Class E award. Ably handling his tiny racing machine, he won two of the three 6-mile skirmishes. The best time established was 16 minutes and 8 seconds. Chester Granath's *Gale II* was runner-up.

The free-for-all test on the third day was won by the *Fritz* in 53 minutes and 30 seconds over the 12-mile course.

Frederic Jungbluth of Madison, Wis., *Fritz's* owner, was elected commodore of the association at its annual meeting, to succeed Starke Meyer.

Four typical 15-square-metre ice yachts as developed at Detroit, ready to start a race on Cass Lake, Michigan. B3 (below, left) is Starke Meyer's "Paula V" of Pewaukee, a modern front steering ice yacht which sailed in the Northwestern regatta



Close sailing! The Six-Metres "Challenge" (65) and "Anis" (51) at the finish of an elimination race off Oyster Bay last fall

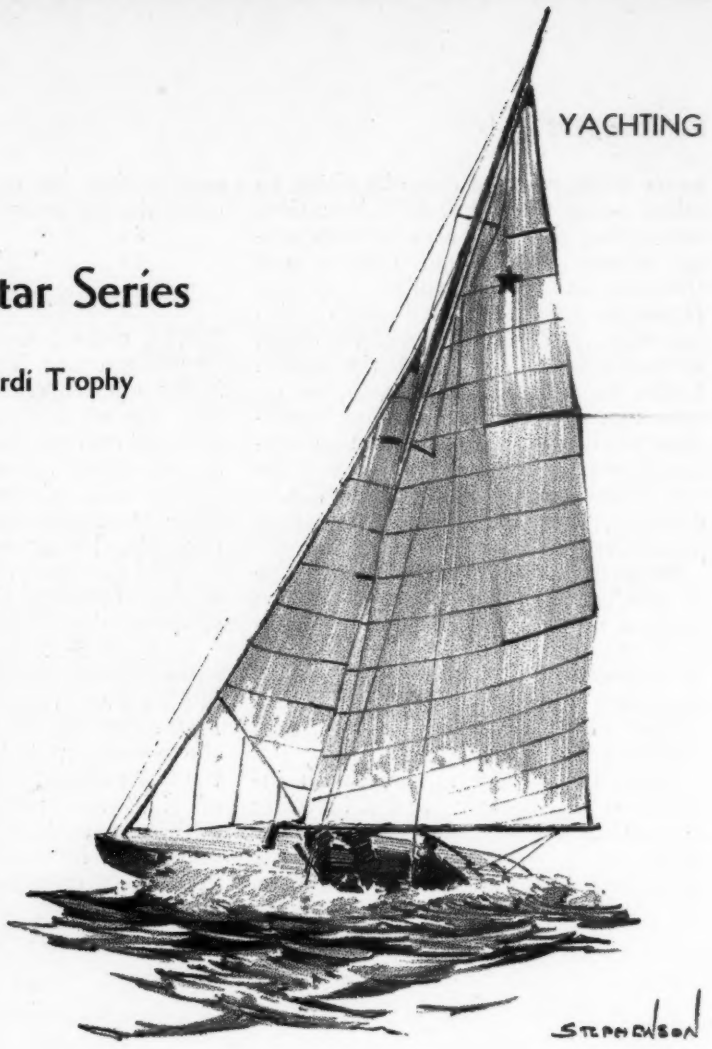
Havana's Mid-Winter Star Series

"Ace II" Wins Cup of Cuba and Bacardi Trophy

SAILING seven back-breaking races, crowded into the last four days of January because of postponements, Adrian Iselin, II, under the most rugged conditions ever experienced by Star skippers off the coast of Cuba, or elsewhere, made a clean sweep of Havana's Mid-Winter Star classic. Once reputed to be a light air sailor, the Western Long Island Sound representative piloted his famous *Ace* through high white-capped seas — seas between which the little yachts frequently passed completely out of sight — to win both the Cup of Cuba and the Bacardi Cup. In each series *Ace* won two firsts and a second, and her skipper proved to be a tower of strength on the winning American team. Though this makes the third Bacardi Cup that Iselin has annexed, it is the first time that he has been successful in the title event and has taken the Cup of Cuba.

While dealing with Iselin's exploits in Cuba, let us diverge for a moment from yacht racing to relate the prize fish story of the Star Class. It was on the day before the first scheduled race — the day before the dreaded Norther broke — that our hero was out on the then placid Gulf, tuning up the *Ace*. *Ace* was boiling along at a good seven-knot clip, when suddenly she stopped dead. Simultaneously with the impact there arose from the water the tail of a gigantic fish. *Ace* had fouled a whale-shark. These monsters, which we are told sometimes attain a length of fifty-odd feet and weigh several tons, have frequently been seen off the Cuban coast this winter. Some of the fish's skin was found on the boat's keel, when she was later hauled out. Iselin freely admits that, in his long career of racing, he was never so thoroughly scared as when that huge tail hove into sight.

To resume with the racing. After three days of enforced inactivity — while the Norther raged and the sailormen visited the race track, the casino and Havana's many cafés — the race committee ordered double-headers, in order to complete the races within the scheduled time. The wind had shifted to northeast but was still blowing twenty miles or more. After the first day the press refused to leave terra firma. Nor could one blame them — it was really no fit weather for small, or even large, boat racing. The starts were made off the mouth of the Almendares River. From there the yachts were sent along the shore to a mark off the Miramar Yacht Club and then out to sea and back, twice around. In spite of conditions so trying that it was impossible to keep marks or the committee boat in position, the race committee, of which Commodore Rafael Posso was chairman, made a splendid job of it. There were no protests and the only fouls that occurred were caused by the whipping of the burgee on the upright of the tossing stake boats against the sails of rounding yachts.



There was only one accident, and that after the second championship race. Sampson Smith carried the mast out of *Pathfinder* while sailing her back into the river.

Second honors — that is to say, such prizes as Mr. Iselin could not take — were about equally divided between Edwin Jahncke, of New Orleans, the veteran Cuban skipper Miguel de Sena, and another Cuban, A. Garcia Tunon. The last named, a high school boy, who won the junior championship this year in dories, thereby winning his Star boat as a prize, furnished a surprise by qualifying for the title event and by placing second in the first two Bacardi Cup races. In the last race of that series, with a two-point lead over the young Cuban, Iselin kept the *Halcon* covered from the start. With his wind bothered at every turn, the youthful Cuban's lack of experience soon decided the issue, as *Halcon* faded back into eighth place. *Jupiter*, Olympic Champion in 1932, would have given Iselin plenty of trouble in the Cup of Cuba series if Jahncke had not touched a mark in the first race. The boat was going well and, as it was, finished first and second in the remaining races. John Muhlfeld, formerly a Victory Class skipper on the Sound, came in for a piece of silverware by winning the last Bacardi race. And that, except for Iselin's being washed overboard in one race and pulling himself back by catching hold of the backstay, tells the story of the first six races — races sailed over the same triangular course and which

(*Continued on page 103*)

Associated Press Photo

Adrian Iselin, II (left) receives the Cup of Cuba from Rafael Posso at the recent International Star Class Regatta at Havana

From Miami to Nassau in "Vamarie"

By GEORGE M. PYNCHON

A MODERATE southeast breeze and smooth water greeted the yachts entered in the Miami-Nassau ocean race, February 12th, the conditions promising a good break for the little fellows. The fleet was divided into two classes, A and B, the former for boats up to 60 feet and the latter for boats between 60 and 90 feet.

The start was made off Miami, the officials of the Miami Yacht Club firing the starting gun at 11:45 a.m. *Aweigh* was first across the line, followed closely by *Vamarie*, which had better way on and soon passed the blue cutter. *Vamarie* was followed by *Azara* and then came *San Cristobal*, *Game Cock*, *Vreda*, *Alibi*, *Four Winds*, *Esperanza* and *Lanakai*. *Vamarie*, carrying a big Genoa jib, then opened up a rather long lead; the others in Class B (*Azara* and *Esperanza*) shortly tacked to the southward. In three hours *Vamarie* had all boats hull down and we thought we might again win the Nassau Trophy. The Coast Guard cutter *Pandora*, the committee boat, came alongside and cruised with us for an hour or more. We learned that *Azara* was about five miles astern. At that time we were doing about nine knots. The breeze held until we sighted Great Isaac slightly to leeward. *Aweigh*, *Azara* and *San Cristobal* followed us to the light in that order.

We sailed on the same tack through a smooth sea, lighted by a brilliant moon with a tremendous luminous ring around it. About midnight the wind, which had been about SE by S all day, started to lighten and head us, and soon we were being pushed well to the northward of our course. At 2:40 we tacked in very light air and were chagrined to find that we were being headed on the port tack and that the best course we could make good was SW. About this time the smaller boats were rounding Great Isaac. *Aweigh*

E. Levick

"Vamarie," V. S. Makaroff's ketch, led the fleet across the finish line by two hours to win in Class B. Cox and Stevens designed her

E. Levick

L. M. Bailliere's 47-foot cutter "Aweigh," winner of the Miami-Nassau race. She is from designs by Sparkman & Stephens

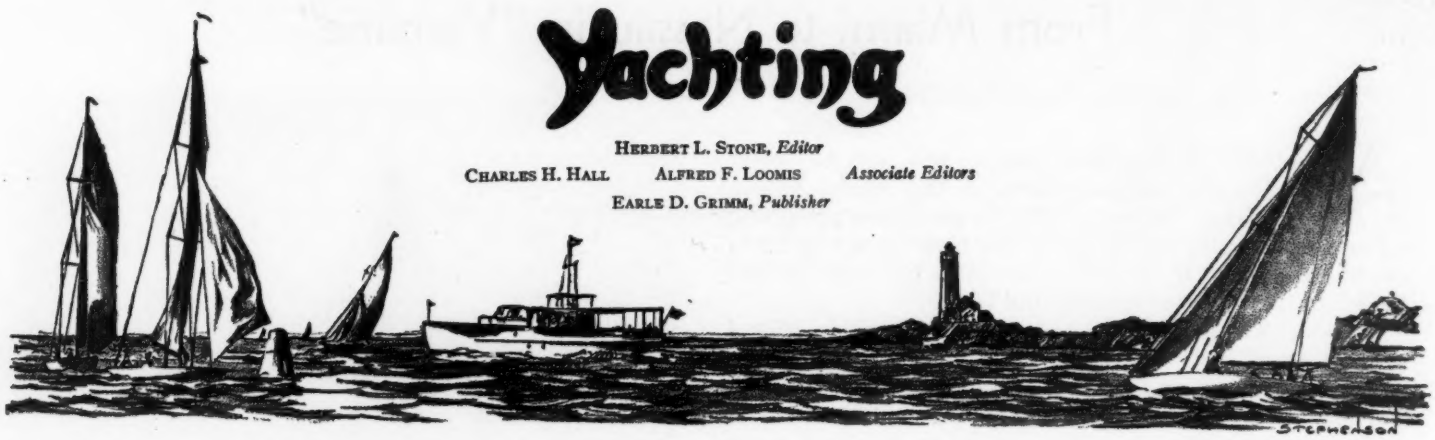
and *Game Cock* made good their course between Great Isaac and Stirrup Key, hence the tremendous gain made by them on *Vamarie*. Dawn found our big lead completely wiped out, with *San Cristobal* and *Aweigh* almost dead ahead and *Azara* abeam and to windward.

We soon passed *San Cristobal* and *Azara*. *Aweigh* tacked to the southward again and passed well astern of us. At 11:00 a.m. *Azara* tacked and we followed a few minutes later, crossing *San Cristobal's* bow by about 1000 yards. By this time *Aweigh* was well in towards the keys, and when she tacked again to the eastward she crossed our bow, much to our surprise. It developed later that she had a slight favoring current. After the race her crew told us that every time we tacked offshore we dropped behind. We had learned our lesson, however, and after that took comparatively short tacks along the keys, where we found more wind.

Aweigh worked out a big lead and seemed to have the Nassau Trophy safe, but we gained steadily on *Azara* and *San Cristobal*. The little cutter, with her handy rig and in the smooth water, outsailed the larger boats in beautiful fashion.

At 8:45 we sighted Nassau Light, bearing SSE, distant about 18 miles; the wind was SSE, about 12 knots. At 10:10 we sighted Gouldings Key, bearing SSW. At 10:40 we tacked to the eastward again, the wind heading us in the narrow channel. We overstood slightly on this tack and boiled in to the finish line in a freshening breeze. We crossed the line at 2:07 a.m., and learned from the officials of the Nassau Yacht Club that we were the first boat in. We knew then that we had won in Class B, and were equally certain that we had lost the Nassau Trophy, which was won handily by *Aweigh*. She finished a little over two hours behind *Vamarie*, Lawrence Bailliere, her skipper, having sailed a fine race.

(*Continued on page 99*)



EDITORIAL

"Born of Inexperience"

THE winter, with its strong winds and frequent gales, has brought with it the usual crop of ill-starred yachting ventures, and the United States Coast Guard has been kept busy towing in unfortunate pleasure craft. No less than three such ventures ended at the end of a towline during November and early December, and one lone navigator was taken off his vessel in a nearly frozen condition. The fact that most of these expeditions come to grief due to unsuitable craft, inadequate preparation, or to inexperience, only serves to emphasize the fact that the sea in winter is no place for the tyro. Winter gales are heavy and frequent, and while a properly designed, strongly built and well handled small boat may very well stand up to winter weather off the coast, failure in any of the three essentials may spell disaster.

The latest expedition to make front page news is that of an entrepreneur in radio broadcasting who in February sent frequent calls for aid to his four-masted schooner *Seth Parker* in the Pacific, somewhere between Tahiti and the Hawaiian Islands. Although the schooner was probably getting a "dusting," the officers of H.M.S. *Australia* which answered her call, and steamed some distance out of her course to succor the ship, found the vessel in good shape and, it is reported, her radio-entertaining master broadcasting his adventures to a breathless public back on land. Somewhat miffed, the *Australia* went her way, only to be recalled later with a request for a tow — if the wireless reports are to be believed. This time some of the *Parker's* crew were taken off, and a U. S. Navy tug was dispatched from Samoa to salvage the vessel. The episode smacks of sensationalism and is not one to fill the hearts of American seamen with pride.

The whole incident seems to call for a thorough investigation by the American government, whatever the facts turn out to be. Incompetence in an expedition of this character is quite as much to be condemned as misuse of the distress call — if it turns out to be that. There have been entirely too many such half-baked ventures during the past two years on the part of those who have had little or no offshore experience. Which again forces us to recall the old adage that those who know the sea best respect it the most.

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Suggested Modifications to Our Measurement Rule

OWING to the long economic depression, many yachtsmen have felt the necessity of revising their racing budgets downward. This has resulted in the installing of engines in a number of the moderate sized racing yachts, in place of maintaining both a power tender and a racing yacht. This change has ruined their chances in the racing classes, yet the boats do not properly belong in the cruising class nor rate fairly under a cruising rule. A well-known racing skipper, Com. Henry L. Maxwell, sensing the increase in the use of power in sailing yachts, makes the following suggestions for a revision of the measurement rules which would allow boats so equipped to have some chance in the racing against yachts without power. Here are Mr. Maxwell's specific suggestions:

"First, auxiliaries with power enough to drive them at 6 knots in a calm should receive a 2 per cent discount from their actual racing length. In other words, an auxiliary with an actual racing length of 50 feet should have a revised rating of, say, 49 feet.

"Second, the draft limit should be revised to enable auxiliaries between 30 feet and 50 feet l.w.l. to 'make' most docks — at least at high water. This would mean taxing all draft over 7 feet. At present our measurement rule forces a 30-footer to go to 6 feet draft, a 40-footer to 8 feet and a 50-footer to 10 feet. Surely a formula can be devised that will give a moderate draft yacht an even chance with a deep one.

"Third, the present-day hollow, built-up masts are fragile and when broken take too long to replace. Unless an owner can afford a spare one he runs a chance of having his racing season spoiled through a dismasting. Therefore minimum mast weights should be established in all classes and the maximum height of all fore triangles should be limited.

"Fourth, as both Genoa jibs and parachute spinnakers are simply rule cheating devices for increasing the amount of unmeasured sail area, and as both sails are very unwieldy, if greater actual sail area is wanted let the tax on measured sail area be reduced and bar these rule cheaters.

"Fifth, in order to encourage amateur crews, let the crew limit be increased to one for every 200 square feet of sail area, etc., and count each paid hand over one-third of the allowed total as two. For example, a yacht with 1801 square feet sail area may have a racing crew of ten amateurs, three paid hands plus seven amateurs, or four paid hands plus five amateurs.

"Finally, in order to build up non-sloop racing, yawls should be classified with schooners and ketches. This should greatly increase the popularity of yawls and would result in the rig conversion of quite a number of outclassed sloops."

Sensible, but hard to bring about.

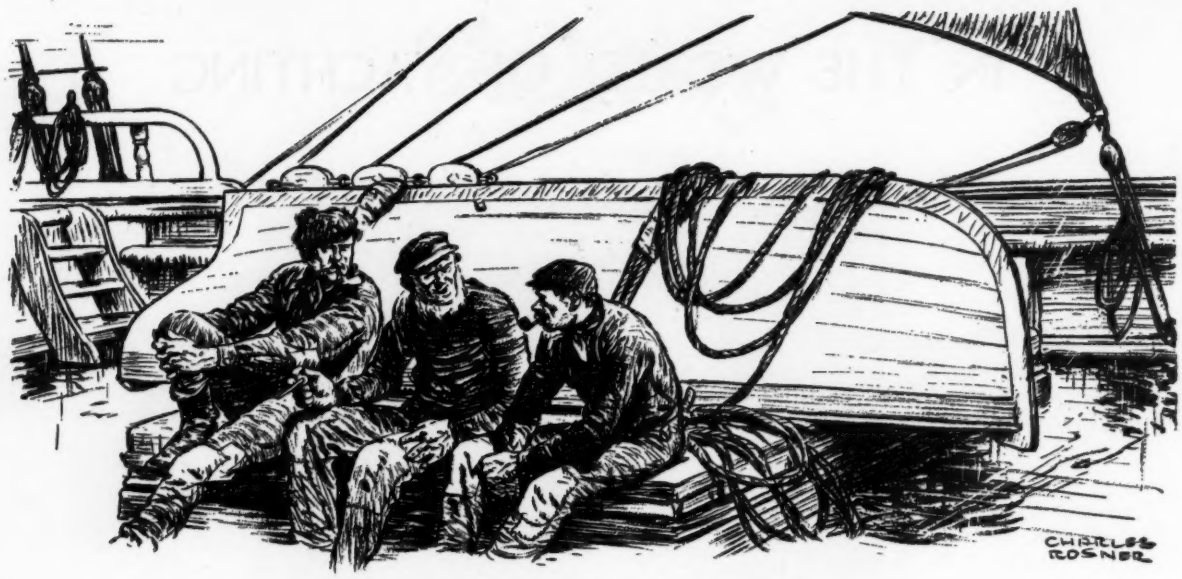
IN THE WORLD OF YACHTING

C. RAYMOND HUNT

AMONG the lists of ten ranking racing skippers that have been made up this winter, the name of "Ray" Hunt has received many nominations. Among the New England yachtsmen he is, perhaps, better known personally than he is in other localities, but this is only because most of his sailing has been done in waters off that coast.

C. Raymond Hunt began his racing career at an early age. While still in his teens he twice won the Sears Bowl, which carries with it the Junior Championship of the United States. It was in 1923 and 1925 that he captured the trophy for the Duxbury Yacht Club. In 1924 he made the finals in this championship event, but lost to Harry B. Thayer. He also won for the same club, for three years in succession, the mixed doubles championship, sailing with Miss Brenda Tweed. In 1929 he sailed the Boston Eight-Metre "Gypsy," owned by Frank Paine, in the series against the British "Eight" "Caryl," in the series for the Seawanhaka Cup, on Long Island Sound. This series was, perhaps, the closest match ever sailed for this famous cup. Although only twenty-one years old at the time, and sailing against the veteran W. F. Robertson, he came within six seconds of winning the last race and the series, the match standing at two wins for each yacht up to the last race. Only one of the five races that year was sailed in weather supposedly favorable to the Boston yacht. Last season he sailed his Class Q "Hornet" to win two of the three class championships at Marblehead, and coming down to Long Island Sound he won in her the Manhasset Bay Challenge Cup and carried it back to Marblehead.

His yacht clubs are the Eastern and the Duxbury. It was in the waters off the latter club that most of his early sailing was done.



Under the Lee of the Longboat

By "SPUN YARN"

A FEW months ago the Skipper told me that if I didn't get contentious pretty soon he'd reduce my wages. I was all for letting nature take its course, but a threat is a threat. . . . Time passed, as indicated by the three dots. Words appeared in print. Letters were written. And now, without ostensible reason, I'm back to my old policy of Sweetness and Light. Lovely weather we've been having, hey? Won't it be too jolly when the winter covers are off and we can go afloat again? I can hardly wait. Yachting is such fun, and isn't it grand that every follower of the sport is a disinterested sportsman? We're all good fellows together.

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One of the first things I did on readopting the Sweetness and Light policy was to pay off a member of the Longboat crew who made the objectionable remarks. Paid him off with the rope's end. He's the bird who doesn't show in the above picture. He's under the boat. And, if I should slip and allow anything controversial to get into this department in future, don't bother to cancel your subscription. The same bird will be paid off again before your letter reaches me. That's his job from now on. I put out and he takes it.

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Somewhat along this line, I'm employing a "whipping-boy" on whom I can vent my displeasure if I happen to get riled up. The whipping-boy is a figure of speech, as what I have in mind is an imaginary yacht club. From now on if there seems to be reason for criticizing the activities of any existing club I can set up my whipping-boy and lash out at him. Thus I shall save the tender feelings of people who say, "I think such-and-such an organization deserved censure, but why did you name it?" So my imaginary club is called "The Lee Rail Vikings," and its clubhouse is situated on any arm of the sea or any body of fresh water. I shan't particularize about its personnel at this time except to say that they're all amateurs — that is, amateur politicians. No writer is allowed in the club membership, as you can't trust writers.

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One thing I don't like about the Lee Rail Vikings is the way they run their club. They think that a yacht club should be a village institution, an assortment of social rooms for ladies and gentlemen surrounding a bar. Now, I like a bar as well as the next man, but I think that a yacht club's physical equipment should consist of a boathouse, a marine railway, and a public telephone — the last being for the purpose of calling up your wife or your mother to say that you're home from the cruise and will she please come down and get you as you're soaking wet and haven't had any hot food for two days. But the Lee Rail Vikings go in so heavily for the social amenities that if a cruising man comes ashore in a torn shirt and dirty pants he's suspended for thirty days.

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Of course, the ideal yacht club is one which has no clubhouse at all, whose membership is closely knit by love of the sea and sailing. Which is an indirect way of mentioning the Cruising Club of America.

+ + +

Speaking of which, I've been surprised to hear from several sources that the Cruising Club doesn't like the idea of a radio direction finder. I can't speak for the club, of course, but I do know that it has taken no official stand for or against radio, and I can't imagine how this rumor started. A few months ago on this page I took a Horatio-at-the-bridge stand against radio aids to navigation, feeling then that I'd better say a good word for old-fashioned position finding before I was hopelessly obsolete. I'm glad I did, because at the Motor Boat Show I saw the Bludworth radio compass demonstrated and went modern to a volley of *Ohs* and *Ahs*. Granting its ability to pick up cross bearings from lightships and shore stations and thus to fix a yacht's position instantly, the thing I liked next best about the radio compass was its pacific and retiring disposition. I mean, it doesn't run aerials aloft to hang the unwary and it doesn't even have to stick its loop out through the deck to trip you up and foul the fore sheet. It can all be kept below handy to the navigator's bunk. And that's something. It looks now as if the ambition of every conscientious yacht navigator would shortly be realized — that ambition being to keep strict track of a yacht's position without turning out between meals.

"Belisarius," Designed by the "Wizard of Bristol"

HERE ARE the plans of the new cruising auxiliary yawl recently completed for Commodore Charles B. Rockwell, Jr., of Bristol, R. I., by the Herreshoff Manufacturing Co. from designs by the famous Nathanael Greene Herreshoff. *Belisarius*, as she has been named, is 56′ 0″ length over all, 40′ 0″ on the water line, 14′ 0″ beam and 5′ 7″ draft. She is rigged as a modern marconi yawl and carries 1466 square feet of canvas.

The bow has been carried well out to eliminate pounding and to do away with a bowsprit. In outline, it suggests that of the marvelous 46-footer *Gloriana*, designed and built at Bristol 44 years ago. *Gloriana*, by the way, carried over 4200 square feet of sail and was the fastest yacht of her size afloat. The new yacht's construction is interesting, the oak frames being stiffened by diagonal strapping of galvanized steel. Her planking is of yellow pine, single thickness, below water and double, of cedar and Philippine mahogany, above the water line. Sheerstrake, deck and deck erections are of India teak and all fastenings are of bronze. The centerboard is built of oak, weighted with lead and streamlined, while the casing is of Tobin bronze, as are the keel plate and floor plates. This makes a strong job and will prevent worry as to the ravages of the teredo when in southern waters where the yacht will see considerable service. The centerboard trunk is entirely below the cabin floor.

Spars are of Sitka spruce, painted, and each mast is wired for a masthead light. There are also small flood lights on each spreader arm to illuminate the decks when working at night. Standing rigging is of stainless steel and also much of the running rigging. The sails were made by Ratsey & Lapthorn of City Island, N. Y.

The engine is installed slightly off center, on the starboard side aft. It is a Chrysler Ace, developing 65 hp. and turning a Herreshoff folding and locking propeller through a 2:1 reduction gear. The motor has a large auxiliary generator to furnish current for lights, electric capstan and radio sets. There are two copper gasoline tanks, of 90 gallons capacity each, under the deck in wake of the cockpit, and a 120-gallon copper water tank under the cabin floor amidships.

The long clipper bow is reminiscent of that of the famous "Gloriana"

The owner's quarters are laid out to sleep six people. The stateroom has an upper berth and a drawer-like lower berth which pulls out for use. Similar upper and lower berths are installed on the starboard side of the main cabin, with a transom berth and a regular standing berth on the port side. The joinerwork below is pine, painted white and trimmed with mahogany in the stateroom and a stained pine finish in the cabin.

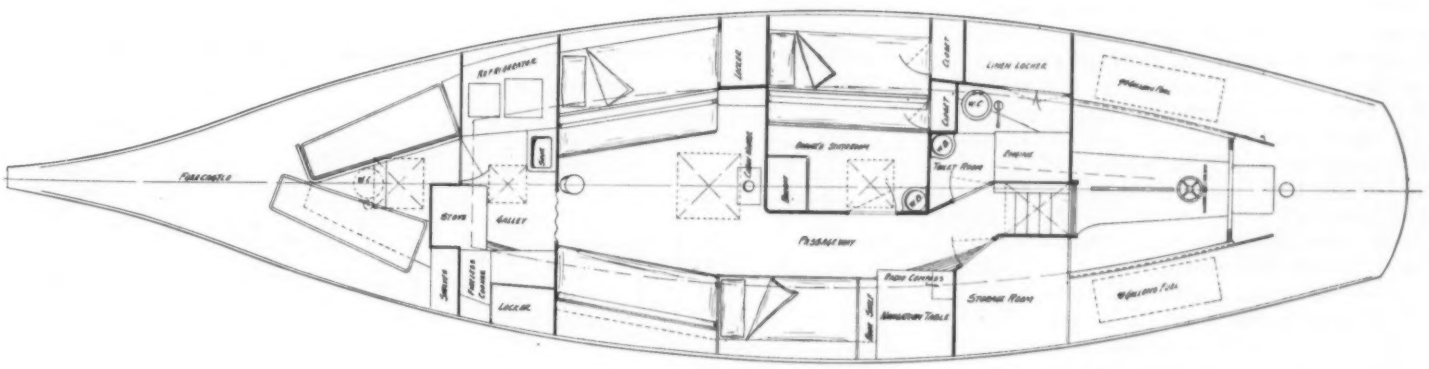
Forward of the cabin is the galley, with ample headroom under the cabin trunk. Sink, dresser top and shelves are sheathed with Monel metal. A large icebox, with special insulation, supplies refrigeration for long cruises and for southern waters. Besides a coal-burning Shipmate range, there is a fireless cooker with an alcohol stove for heating the stones in warm weather. An open hearth Shipmate is in the cabin to provide warmth on cold evenings and damp days.

Aft are a toilet room and an enormous storage room. Just forward of the latter is the navigator's desk, with chart file under it and radio direction finder on it. This set may also be used for picking up time signals and weather reports. A broadcast receiver is in the main cabin.

Though the forecastle is fitted with two pipe berths, the yacht will be run with only a single paid hand.

Skylights and port holes are glazed with shatterproof glass. The yacht steers with a wheel and has a spherical compass in the cockpit. She can carry her tender on davits, on either port or starboard side, amidships.

She was launched about the middle of January and was under sail on the following day. Then she was fitted out and, two days later, she made sail to the southward. It is reported that she had been entered in the Miami-Nassau Race, scheduled to start February 12th.



Accommodation plan of "Belisarius," Commodore Rockwell's new auxiliary yawl

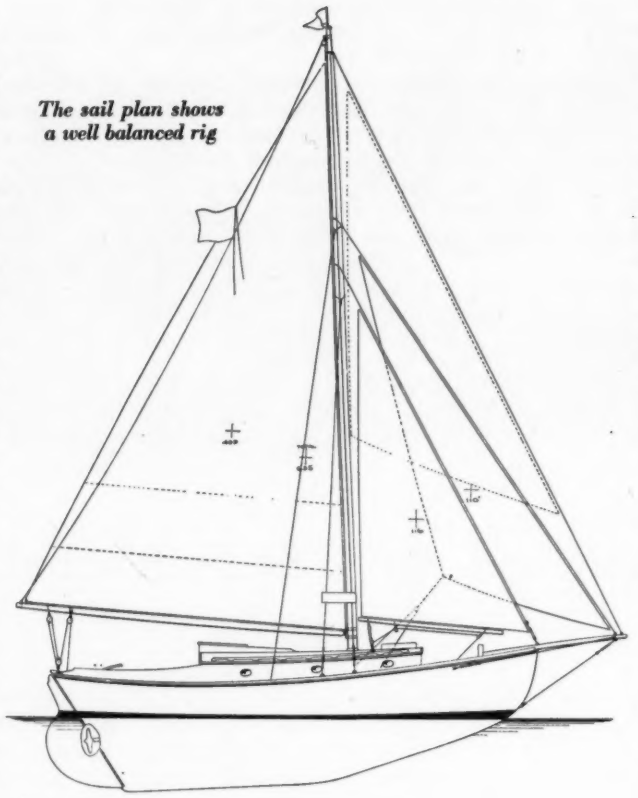
The plans reproduced in this section are the property of the designers under whose name they appear. For further information concerning any design address the naval architect in question.

A Cruising Cutter Designed by Alden

YACHTSMEN have long been interested in cruisers of moderate size and when the Alden designed ketch *Fayaway* appeared last summer there was immediate response from the men who had been seeking a small seagoing craft. Her ability and comfort attracted attention and several similar yachts have been started. But many wished a smaller craft which would be less costly to build and operate and yet would have, as far as possible, the same good qualities as the larger boat.

The result is that the cutter shown herewith was designed by John G. Alden and five of these auxiliaries are now under construction at the Morse yard in Thomaston, Maine.

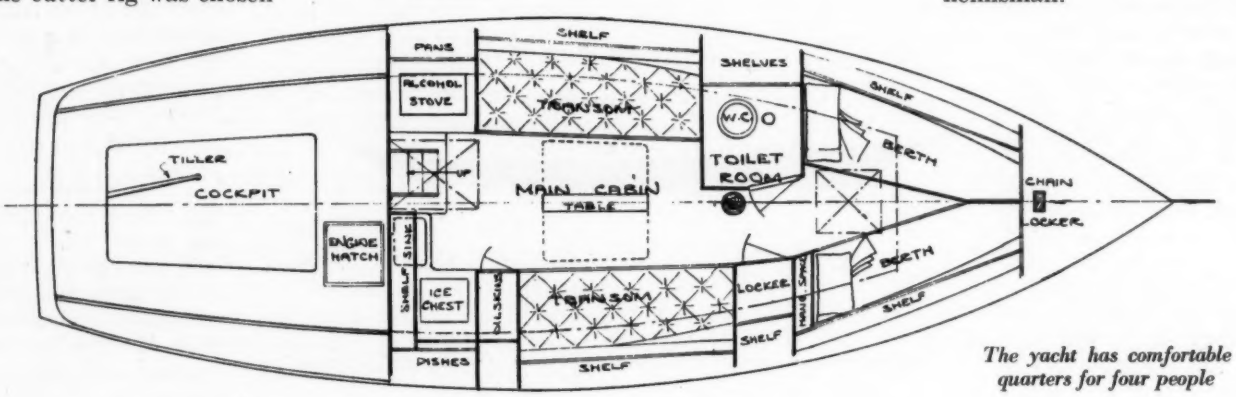
The new design is 32′ 9″ in length over all, 28′ 6″ l.w.l., 10′ 10″ beam and 5′ 0″ draft. Her hull is slightly longer on the water line and a little beamier than the *Svaap*, in which W. A. Robinson circumnavigated the world, but quite similar in character. The cutter rig was chosen because of its simplicity, ease of handling and efficiency in coastwise cruising. The total sail area is 635 square feet.



The sail plan shows a well balanced rig

Below there is ample accommodation for four people. Forward is a stateroom with a standing berth each side and headroom over the greater part of the floor. Next aft is a toilet room with a hanging locker opposite. Then comes the main cabin, with a transom berth each side, and an oilskin locker handy to the companionway. The galley is aft, with ice box, sink, dresser, shelves and dish rack on the starboard side and alcohol stove and stowage for cooking gear to port. Headroom in the cabin is 6′.

The cockpit is large for a boat of the size and has a hatch to the engine space in the bridge deck. The power plant is a Gray Light Four, developing about 17 h.p. It is fitted with a reduction gear and is installed in a separate compartment. The controls are brought within reach of the helmsman.

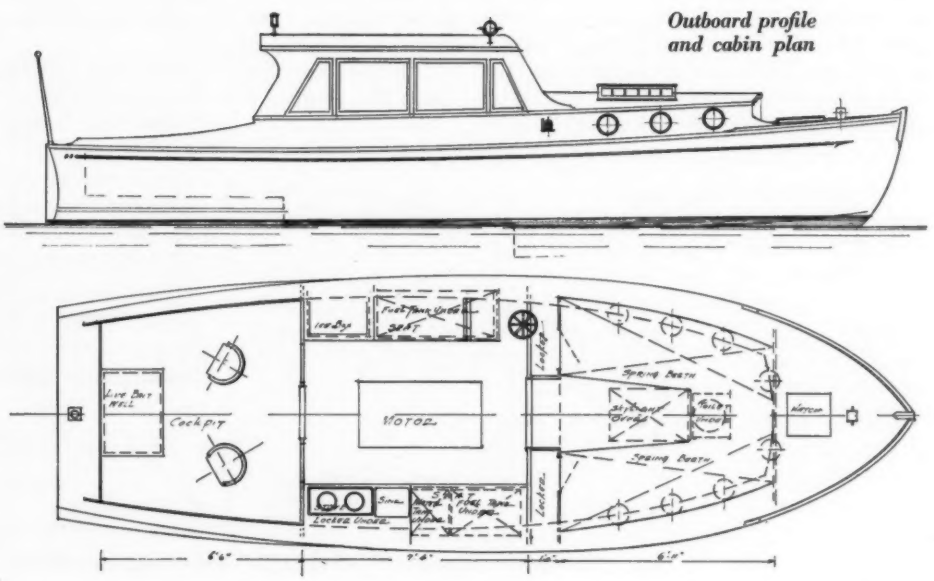


The yacht has comfortable quarters for four people

A Neat Motor Boat for Fishing Trips

DESIGNED by John O. Prados of New Orleans for Frank M. Stone of that city, this trim craft is 27′ 9″ in length over all, 26′ 2″ l.w.l., 8′ 10″ beam and 2′ 0″ draft. As she will be used mainly for short fishing trips in the bayou section of Louisiana, the cruising accommodations are somewhat limited. Under the trunk cabin forward are two berths, toilet and lockers. In the midship compartment are the engine, cooking range, sink, dresser and ice box. Here also are seats each side with fuel and water tanks under them. This compartment is well screened. Aft is a large open cockpit with two swivel seats for the fishermen.

The engine is a Universal Model 6–85 which drives the boat 15 m.p.h. The hull, of the V-bottom model, is built of yellow pine and cypress. Construction is simple and the cost of building is low.



Outboard profile and cabin plan

A Hand Motor Ketch for the West Coast

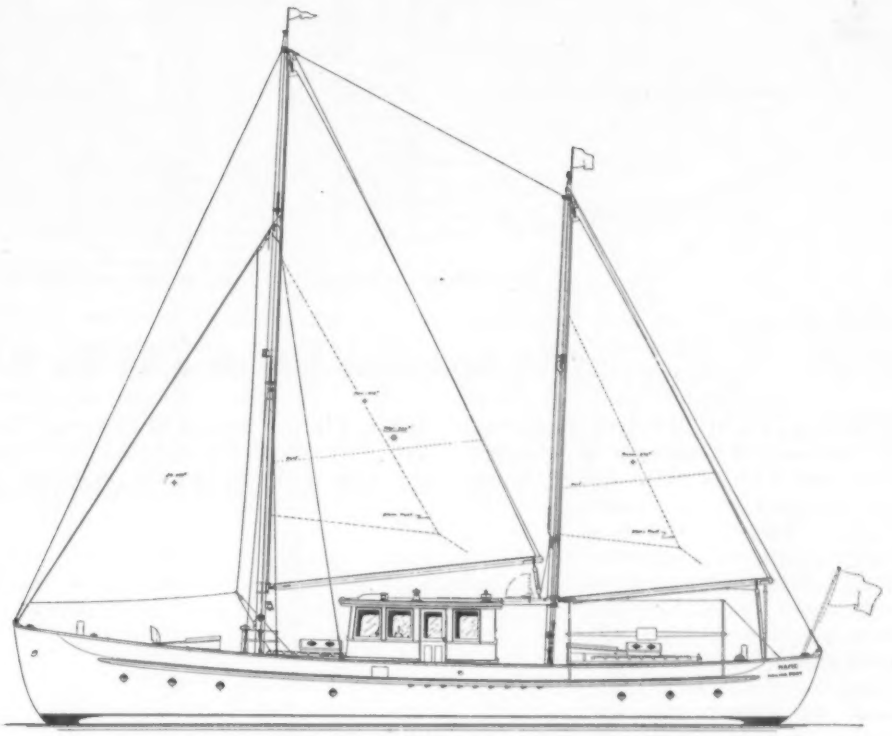
THIS interesting yacht, of the motor ketch or motor-sailer type, is now under construction. She was designed by William H. Hand, Jr., of New Bedford, Mass., for a California yachtsman who desires to remain anonymous for the present, and she is being built by the Wilmington Boat Works, of Wilmington, California.

Her principal dimensions are as follows: length over all, 67′ 0″; beam, 16′ 0″; draft, 6′ 8″. Her displacement is 57½ tons. The lines, appearance and general arrangement of the yacht were developed from those of *Seal*, Mr. Hand's successful motor ketch which was designed by him for his own use and built last year by Hodgdon Brothers at East Boothbay, Maine. The new boat, however, is approximately one-third larger and has greater cruising radius. She can cover more than 2000 miles without refueling or needing to take on stores and water so that she can make long passages, such as a cruise to the Gulf of California, without difficulty.

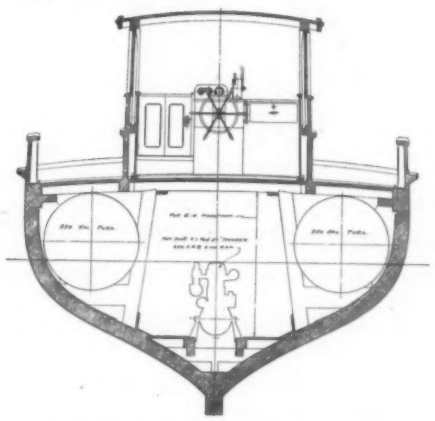
The new yacht is rigged as a marconi ketch and spreads a total of 993 square feet of sail. Of this, 239 square feet are in the jib, 475 in the mainsail and 279 in the mizzen. There are storm trysails for both main and mizzenmasts.

The yacht's construction is rugged, the frames being of the double sawn type and of ample size. The outside planking is of 2″ Oregon pine and there is a heavy structural ceiling with stout bilge strakes, shelf and clamp. The decks are of teak, and a ship type rail, with husky stanchions, extends the full length of the hull. This rail is 18″ high forward and 14″ aft, while amidships the main deck breaks down 8″ so that the rail is 24″ high in wake of the pilot house and aft to the after cabin.

The engine is a Hall-Scott Invader with reduction gear of 3:1 ratio. It develops 250 hp. and will give the yacht a cruising speed of 10 knots and a maximum speed considerably higher. Fuel consumption will be low. The fuel tanks, cylindrical in section and of heavy scantlings, contain 1700 gallons. These are in the engine room and are set on heavy beds and well braced in position. The fresh water capacity is 500 gallons.



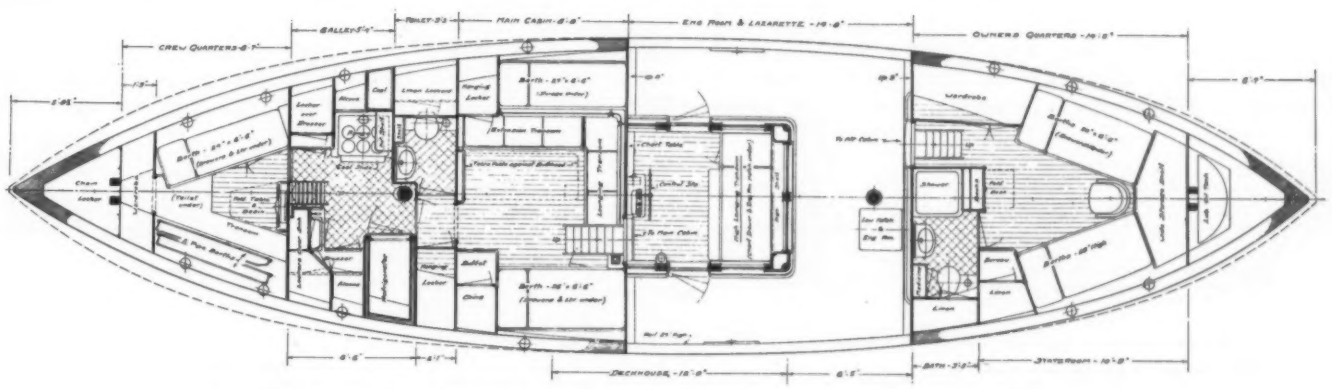
The new yacht is a development of the designer's "Seal"



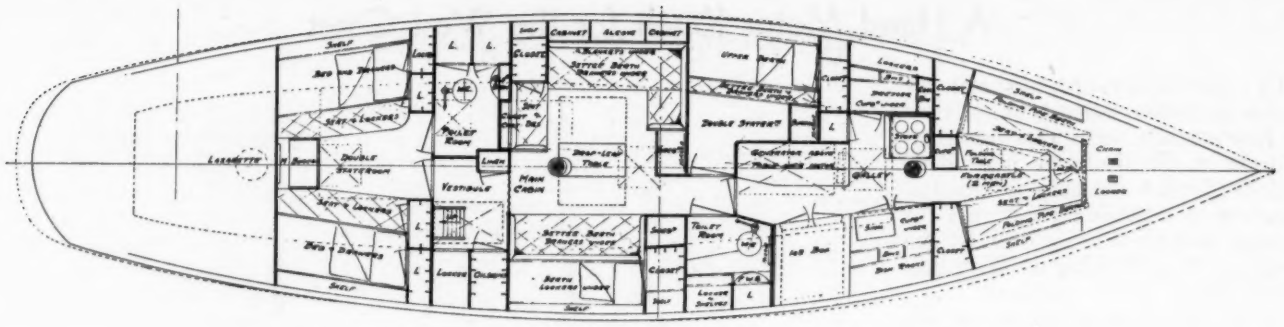
The midship section shows an easy form

On deck, a conveniently arranged pilot house will give protection in bad weather. There is a high lounging transom across its after end. Under this are a hatch to the engine room and a drawer for charts. A folding chart table is fitted near the wheel and all engine controls are brought within easy reach of the helmsman. In addition to the usual standard navigation equipment, there will be a Photo Electric Pilot control.

The arrangement below includes a forecastle with pipe berths for three men, a galley the full width of the hull, the main cabin with sleeping accommodations for four, and a toilet room. Aft is a cabin for two with a bath room adjoining. This cabin has bureau, shelves, linen locker, and a huge wardrobe. The engine room is amidships and contains the usual auxiliaries. It has full headroom and hatches to the pilot house and to the deck. The rooms below are large and there has been no attempt to divide the space into a lot of little cubbyholes in the attempt to obtain privacy.



The cabin plan has been laid out to give a stateroom aft for two, separate from the rest of the quarters



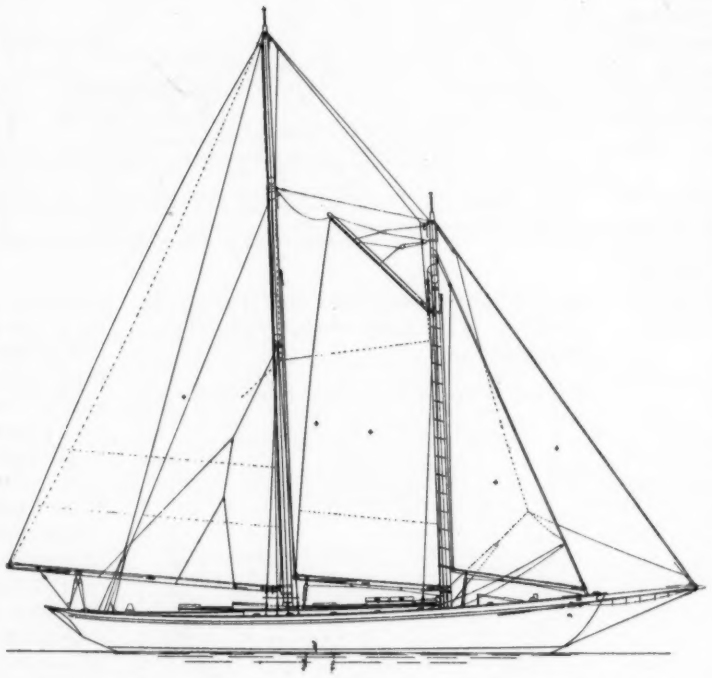
The yacht accommodates seven in the owner's party and two men forward

An Interesting Schooner for the West Coast

THIS ATTRACTIVE schooner, from the board of Charles G. MacGregor, naval architect of East Lynn, Mass., was designed for a Pacific Coast yachtsman who is a large contractor. Unfortunately, after the plans were completed, many of the owner's contracts were tied up so that the construction of the vessel has been postponed until times improve. The yacht is 61′ 0″ in length over all, 47′ 0″ l.w.l., 15′ 0″ beam and 8′ 6″ draft.

Keel, frames, beams and floors are of white oak and the planking is double, of mahogany. Plank fastenings are Tobin bronze screws, with bronze bolts through the floors and the lead keel. She has 25,000 pounds of lead on her keel and about 3000 pounds inside for trimming ballast. Rail cap, hatches, skylights, cabin trunk, etc., are of teak and the interior bulkheads are of mahogany plywood with teak or black walnut trim.

Her spars are hollow, standing rigging is of stainless steel wire, blocks are of ash or lignumvitæ. Turnbuckles are of bronze and there are bronze winches for halliards. The sail area is 1774 square feet, 215 in the jib, 213 in the staysail, 462 in the fore and 884 in the mainsail. A short bumpkin could be fitted for a permanent backstay.



She is rigged as a bald-headed schooner with 1774 square feet of sail

The engine is a Red Wing Model B, though a fuel oil engine of the same make could be installed on the same base. The fuel oil tanks could then be placed under the cabin floor though the designer has located the gasoline tanks under the side decks in wake of the cockpit. The water tanks, of 250 gallons capacity, are of Monel metal.

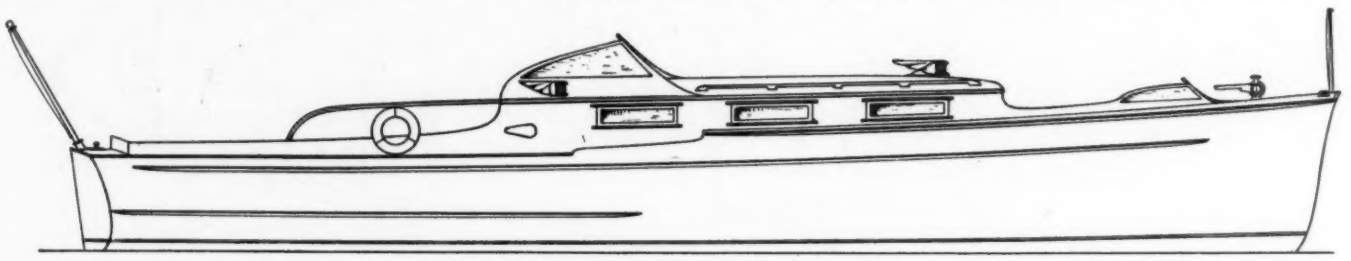
The yacht is intended for offshore cruises with the owner and his family, with one or two guests. The cabin layout is sensible and provides good accommodations for a party of seven, with two paid hands in the forecastle. There is a bureau in each stateroom and plenty of lockers and drawers all over the boat. For cold weather cruising, the sideboard could easily be shifted to go under the chart table and a coal stove or open fireplace fitted at the forward end of the cabin. This feature would be appreciated in foggy weather or in early spring or late fall when the days and nights are cold.

A 12′ sailing and rowing dinghy, fitted with an outboard motor, is carried on davits on the port side.

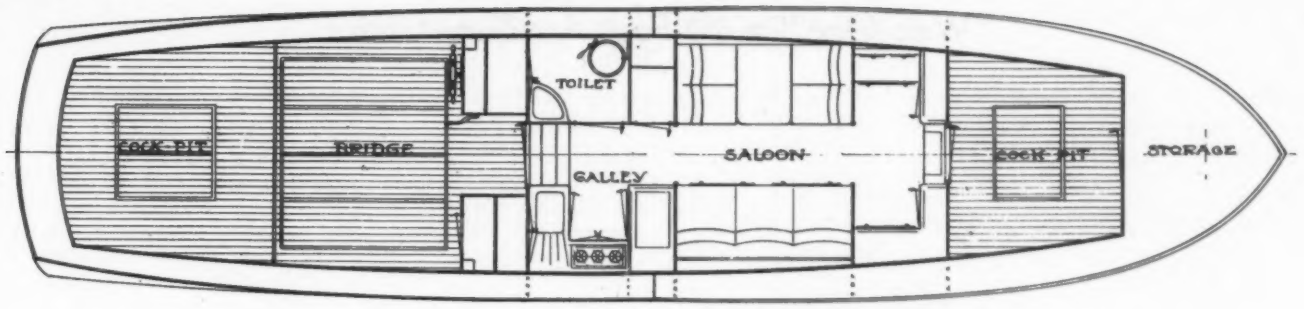
A 47-Foot Express Cruiser by a.c.f.

THIS RAKISH new craft, designed by A. W. W. van Hoorn, naval architect of the American Car and Foundry Company, and built at the a.c.f. plant in Wilmington, Delaware, offers the exacting owner a comfortable cabin boat with a speed close to 30 m.p.h. Construction is high grade, with double planking of mahogany or Spanish cedar. The profile, with the low cabin trunk and the raking windshields, is attractive.

The main cabin is 10′ long and has a Pullman seat and table arrangement on the port side and sofa and upper berth



Outboard profile of the new a.c.f. express cruiser



The boat has good accommodations below and lots of cockpit space

to starboard. Forward is an interesting layout of bookcases, bureau and desk, all worked out in mahogany. Aft, the galley, with icebox, sink and Shipmate alcohol stove, is to starboard with a toilet room opposite. The roomy forward cockpit is reached through a wide door from the saloon. The after cockpit and bridge deck are 18′ long, the cockpit being one step lower than the bridge deck. The power plant consists of a pair of 250 hp. Hall-Scott Invaders.

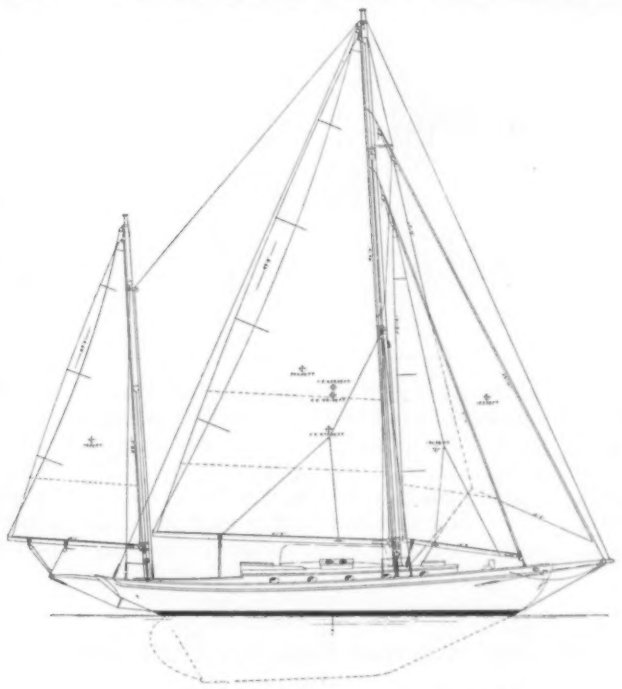
A Cruising Yawl Designed by Winslow

HERE IS a pleasing looking yawl from the board of Ralph E. Winslow, naval architect of Quincy, Mass. She is of a size that can be handled and kept up either with or without a paid hand, her principal dimensions being as follows: length over all, 42′ 8″; length on water line, 32′ 8″; beam, extreme, 11′ 9″, and draft, 6′ 3″. She has 10,000 pounds of iron on her keel and about 2500 pounds of lead inside as trimming ballast.

The rig is modern and the total sail area is 981 square feet, the jib being 153 square feet in area, the staysail 152, the main 506 and the mizzen 270. She is designed to balance under all four sails, under mainsail and fore staysail, or under mizzen and the two headsails, and to handle well under any of these combinations of canvas. The main boom has been kept fairly high above the deck so that the dinghy may be carried on top of the house, stowed bottom up over the skylight.

The cabin trunk is long and fairly low and is strongly braced in wake of the mast. The cockpit is roomy and the house has been laid out to allow good room outboard. Oval ports, hatches and skylights assure plenty of light and air below decks.

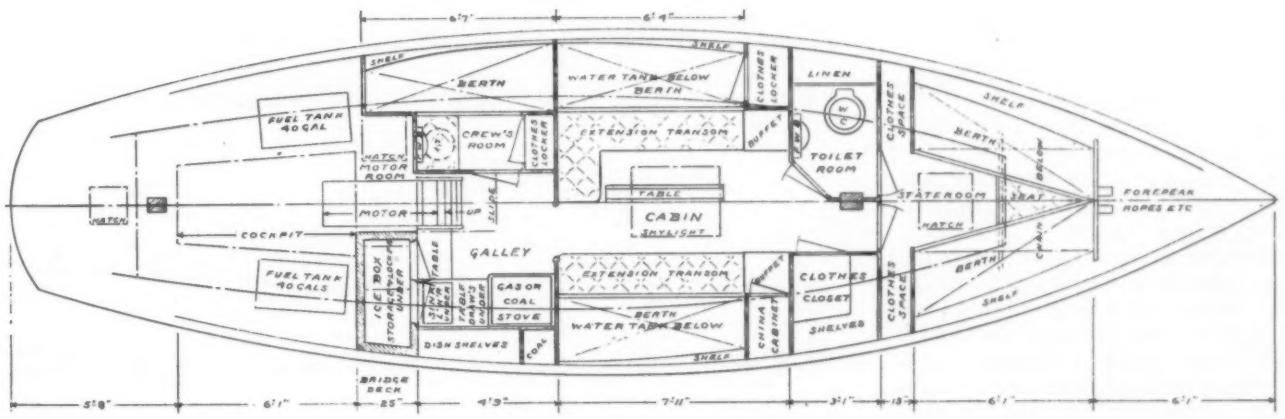
The quarters have been designed to accommodate seven. There is a double stateroom forward, next to which is the toilet room, to port, and a large clothes locker to starboard. The main cabin has two extension transom berths and two standing berths outboard, lockers, buffets and folding table. Aft, on the starboard side, is a compact galley with the icebox filled from the cockpit. To port is a single stateroom, with w.c. and folding wash basin, which may be used for a guest or a paid hand as desired.



The rig is well balanced and attractive

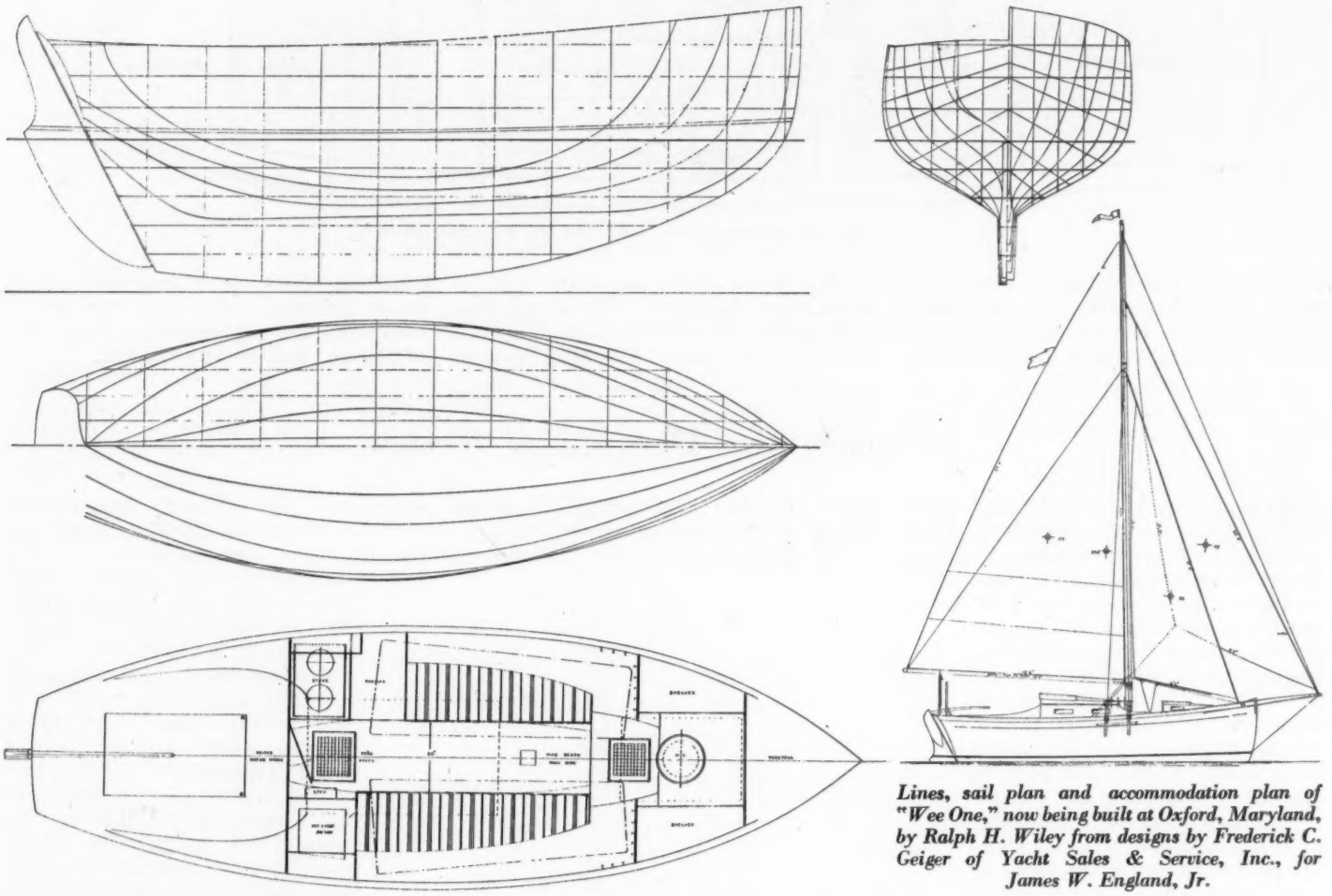
The engine, a 4-cylinder 30–40 hp. motor, is installed on the center line under the bridge deck. Its forward end is accessible when the companionway ladder is removed while the engine compartment may be reached through a hatch in the bridge deck. Two fuel tanks, of 40 gallons capacity each, are under the deck while two 50-gallon fresh water tanks are under the berths in the main cabin.

The yacht has ample deck room for handling sails, with good space forward for working around the anchor and plenty of room aft to get at all the gear on the mizzen. She can be handled easily by two. Even with her moderate rig she should show a fair turn of speed.



The cabin plan of the new yawl shows quarters for seven

"Wee One," a 20-Foot Auxiliary Cutter



Lines, sail plan and accommodation plan of "Wee One," now being built at Oxford, Maryland, by Ralph H. Wiley from designs by Frederick C. Geiger of Yacht Sales & Service, Inc., for James W. England, Jr.

THIS LITTLE craft, the latest example of the tabloid cruiser type, was designed by Frederick C. Geiger of the Yacht Sales & Service, Inc., of Philadelphia, for James W. England, Jr. She is now nearing completion at the shipyard of Ralph H. Wiley in Oxford, Maryland. *Wee One*, as she has been named, is a big little boat for her inches. Her dimensions are as follows: length over all, 20′ 0″; length on water line, 18′ 3″; beam, on deck, 6′ 4″; and draft, 3′ 9″. Her displacement is 5250 pounds.

The arrangement below is conventional but livable, with transom seat and folding berth each side, toilet forward and galley aft. The engine, a single cylinder machine, is installed under the bridge deck. *Wee One's* sail area is 305 square feet. The gallows frame aft will be found useful when reefing.

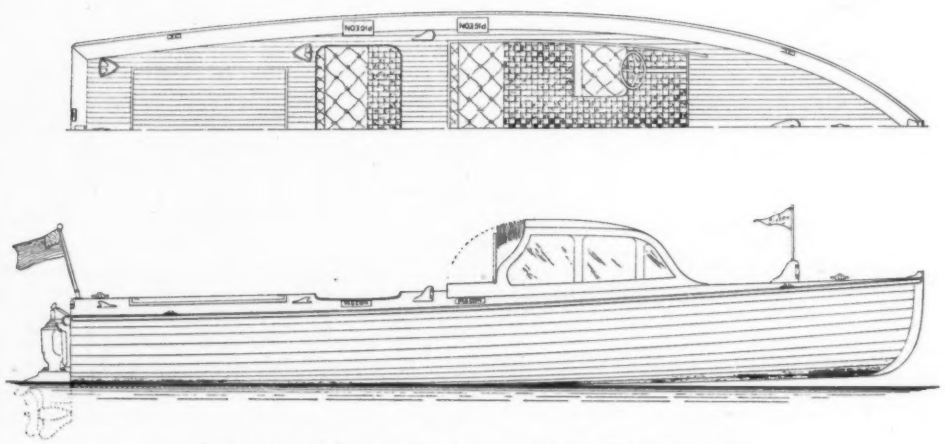
A Fast Round Bottom Runabout

THIS 28-footer, named by the builders a DeLuxe Landau, was designed and built by Pigeon Hollow Spar Co. of East Boston, Mass. She is a round bottom craft and is reported to run level, carry a load well and to pound little at any speed.

The engine may be either a 210 hp. Scripps for a designed speed of 45 m.p.h., or a 325 hp. Scripps for a speed of 55 m.p.h. The engine is set away aft, under hatches, and turns the propeller through a special chain drive of the type worked out by W. J. Snadecki. This outboard drive may be removed when the boat is stowed on deck when used as a tender for a large yacht.

Placing the engine aft gives the rest of the boat to the owner and guests and permits them to be all together instead of being separated by the engine compartment.

Keel and framing are of white oak, planking, deck and house of mahogany, sister keelsons, stringers and clamps of fir, and deck beams of laminated mahogany. Everdur fastenings are used throughout.



Outboard profile and plan of the new Pigeon 28-foot runabout

A 44-Foot "Main Trysail" Ketch

NOW building under the personal supervision of her owner, Carlton B. Hutchins of Chicago, this yacht was designed by Frederic A. Fenger, of Cohasset, Mass. Mr. Hutchins has spent a good many years in the Bahamas and wanted a medium draft boat fitted for cruising, a yacht that would be not only economical to run but have all the comforts one would want.

She is 44′ 0″ length over all; 38′ 11″ l.w.l.; 13′ 0″ beam and 5′ 0″ draft. Her sail area is 1102 square feet. With fairly sharp deadrise, somewhat flaring sections, soft bilges and moderate displacement, she has an easy entrance and a clean run. With her moderate sail plan, she should drive easily at a small angle of heel. For windward ability, her keel has the slight reverse drag of the dhow type which puts the lateral plane where it is efficient in a boat of limited draft.

As in other applications now being made by the designer of this rig, the split-sprit no longer remains aloft but hoists and lowers with the sail, thus avoiding the necessity of hauling the canvas through the sprit. Another feature is the use of the split-sprit in replacing the booms on the fore and mizzen staysails. This eases the direct pull on the sheets, eliminates travelers under foot and keeps the sails off the deck when lowering. Credit for this must be given to Wirth Munroe who, for the past year or so, has been using the split-sprit thus in his successful "Suicides" on Biscayne Bay and elsewhere.

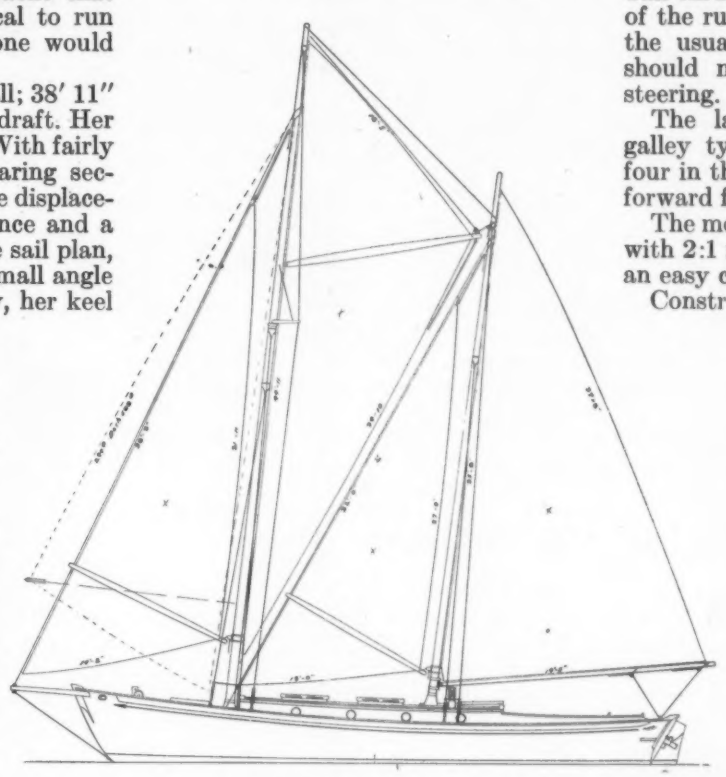
An Edson-Robinson No. 1 steering gear, with the thread reversed, is hung upside down from an oak saddle bolted to the stern knee. Rods connect the inboard and outboard yokes through the transom, sliding pieces prevent water from entering through the narrow slots in the transom. The yokes ride on ball thrust bearings so that the weight of the rudder and the gear is taken off the usual flat wearing surfaces. This should make for long life and easy steering.

The layout below is of the open galley type, with plenty of room for four in the afterguard and a pipe berth forward for a chance Bahama conch.

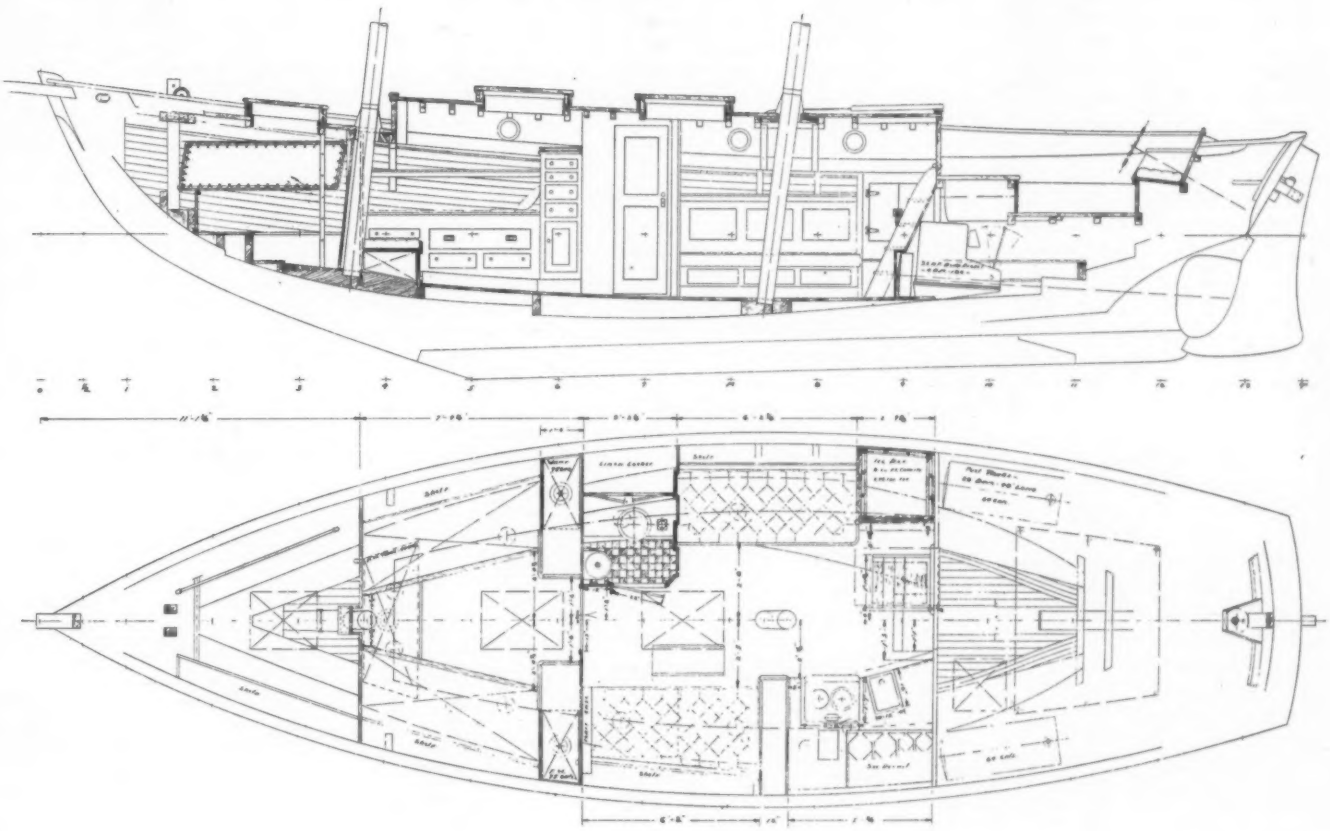
The motor is a 32–40 hp. Buda Diesel with 2:1 reduction gear which will give an easy cruising speed of eight knots.

Construction is rugged, her one-piece keel being 14″ thick with a long iron shoe under it. Planking is 1⅝″ Douglass fir and frames are 2½″ by 3″ steam bent oak on 12″ centers. As the rest of her scantlings are in due proportion, she should be able to satisfy the most exacting of offshore sailors. Every stick that goes into her has been seasoned for at least three years.

After a summer on Lake Michigan, her owner plans to take her down the Mississippi to Florida whence he intends to cruise later to Central and South America.



The total sail area of 1102 square feet is divided into easily handled units. Below, the layout of the boat is interesting and practical



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How High is the Horizon?

Editor, YACHTING:

HERE is a nut for the old salts to crack. In making observations from a small vessel in a rough sea, the horizon is frequently hidden by the crests of nearby waves, and one must wait until the boat is on top of the swell to get a good sight. The height of eye above mean sea level is then greater than in still water. What allowance, if any, should be made for this in working your sight?

Some time since you printed a paper of mine about a run to St. Thomas with Mr. Henry Howard, in which I described making a series of sights from the tops of the waves, and then adding half the height of such waves to the height of eye. This brought letters from two Pacific Coast yachtsmen, both saying that the visible horizon is a composite of wave crests, and is therefore raised above mean sea level in the same degree as the yacht when on a crest, so that no allowance is called for.

This was reasonable, and I accepted it, but then found the following in Dr. Worth's "Yacht Cruising" (p. 282, 3rd ed., 1926).

"The seas were a fine sight — great indigo monsters. . . . I got a good observation when the vessel was on the top of a sea. It is best to use the star telescope, as it shows one when the horizon is obscured by a distant wave. For height of eye add to the smooth-water height half the estimated vertical height of the seas."

I wrote Dr. Worth, asking his comments on our critics above, and he replied that he would in future omit mention of the increase, "first because the matter is open to discussion, and secondly because it is not of great importance, owing to the probable margin of error . . . in a big sea." But he goes on:

"I shall continue to make a little addition to height of eye when making observations from the top of a big sea. I think usually it is right, but I am not dogmatic about it. . . . At height of 7 feet the horizon is only three miles away, and at this distance one can plainly see big waves rising from time to time above the general level of the horizon; and it is from the top of a similar sea that one is taking a shot."

My own feeling is that wave crests chosen for sights are average, not extreme, and that the horizon is a composite of average crests, so that no correction is called for.

An interesting corollary is the reverse error which seems indicated in sights taken from a high bridge, above the crests of heavy seas. Such sights would average out the rise and fall of the steamer, while the horizon would be raised — 15 feet in the case of 30-foot seas. Reducing the height of eye from 50 to 35 feet reduces the dip over a minute of arc, corresponding to a mile of latitude — not a serious error, but worth considering. I have never seen a reference to it in any work on navigation.

So now, you sharks, go to it! Just how high *is* the horizon in a rough sea?

VINCENT GILPIN

Sail Area in Relation to Age

Editor, YACHTING:

THE letter and diagram of "Amateur" in the February YACHTING are very interesting, but why does he stop his curve at seventy? Are all the old boys to be Oslerized at that age? Nat Herreshoff, who started to sail at the age of eight, and who sailed largely alone, stopped only at 82; John Hyslop sailed his 35-foot water line yawl *Tern* until he was over 83, handling her personally, though, in a yacht of this size, with two paid hands; Tom Ratsey, at the age of 81, sailed his cutter *Dolly Varden* in a race around the Isle of Wight, winning fourth place; my old friend "Thalassa," now nearly 93, was sailing until a few years ago. How about George Corry? Is he to give up the Star Class? Dr. E. P. Hussey, who made a long cruise through the West Indies two years ago, is, if I am not mistaken, well over 80. You may be old yourself some day, "Amateur." Why not give us boys a chance?

GRANDPOP

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Precedence in Protests

Editor, YACHTING:

WHILE I apologize for reverting even indirectly to the America's Cup episodes, one statement of very questionable principle has been repeated so frequently that I do not think it should be passed longer without challenge.

It was, I believe, the committee of the N.Y.Y.C. who first maintained that disqualification of either yacht on the first incident of the race of September 22nd must have barred any hearing of the second protest. This has so far passed unchallenged and has been repeated time and again.

This view, and I must admit it is not uncommonly held, appears to assume that disqualification has the effect of disqualifying the yacht as from the moment of the breach of rule, and of causing the yacht as from that moment to cease to be a yacht racing.

If this view is accepted it is at least certain that the decision of the committee after the race cannot have the effect of lifting the offending yacht bodily out of the water some hours before. It is certain that the yachts, in fact, continue to sail and to race after the protested incident and it is equally certain that they are treated by the committee as yachts racing to the end of the race. The chaotic position which must arise if vessels which are, in fact, racing may, by a decision to be reached after the race, be deemed not to be subject to the rules of racing, needs no comment.

I submit that there is no authority for any such ingenious and dangerous construction and that the true effect of disqualification is, not to juggle with time, but simply to disqualify the yacht from receiving any award. Let us then turn to the rules. I must apologize in this instance for referring to the rules of the Y.R.A., but it is probable that those of the N.Y.Y.C. are substantially similar.

Rule 42, "Penalties for Infringing Rules," is explicit. "Any yacht disobeying or infringing any of these rules . . . shall be disqualified from receiving such prize as she would otherwise have won." The rule contains not a word to suggest that the disqualification should have the effect of depriving the yacht of her rights as a yacht racing as from the moment of the protested incident.

If further evidence is required, I submit that the inference to be drawn from Rules 17, 27 and 42 makes it clear that any yacht responding to the 5-minute gun and flying her distinguishing flag must be deemed to be a yacht racing until either she completes the course or abandons the race.

London LAURENT GILES

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Moorings

Editor, YACHTING:

FOR years underwriters, responsible yacht owners, editorial writers and others have harped on the dangers of inadequate moorings. We are all glad to see our harbors crowded with boats, but we are not happy to be moored a few yards from a heavy, more or less neglected boat fast to a couple of old car wheels or an underweight mooring of any description, all tied together with a few fathoms of undersize, rotten mooring pennant. When a bad squall comes along, boats with ground tackle of this kind start for shore and raise havoc on their way with properly moored craft.

Perhaps yacht clubs should have the right to know the condition of all ground tackle of boats in their vicinity and the authority to exercise some sort of supervision. It may be that the harbormaster should issue an inspection certificate before any vessel be allowed a berth for the season.

In any event, something should be done about it. The condition has existed for years. Every time that there is a blow and a study is made of the results, nine times out of ten the damage has been caused by inadequate ground tackle.

WM. E. LUNDGREN

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A Wireless Message

FROM the Pacific, South of Panama, the following radio message was received by an amateur radio station in Portland, Maine.

"*Editor*, YACHTING:

Eighteen days of squalls from Panama to Galapagos (stop) Forty-two days and five hundred miles travel among the islands' eleven anchorages (stop) Climate too indefinable for which refer Beebe's account (stop) Sailing for Marquesas January 18th (stop) Still just the two of us.

(Sig) R. S. Strout"

(From sloop *Igdrasil* WCFG off Webb Cove, Albermarle Island.) This radiogram forwarded by amateur radio station WITE, South Portland, Maine.

Of Interest to the Skipper

Kermath Diesels

THE larger engine in the new Kermath Diesel line, the 6–707, is a four-cycle solid injection engine with six cylinders of 5″ bore, 6″ stroke and 707 cubic inches piston displacement. The cylinders are cast *en bloc* and the valves are overhead. Cylinders are of the removable wet sleeve type with detachable heads and aluminum covers over the valve mechanism. The crankcase may be either cast iron or aluminum alloy. The seven bearing crankshaft, a heat treated chrome molybdenum steel forging, is statically and dynamically balanced and drilled for forced feed lubrication. Main bearings are large, pistons are of aluminum alloy heavy duty Diesel type. Connecting rods are of chrome molybdenum steel, heat treated.

Helical gears of ample face width drive camshaft, generator and water pump. The fuel pump is driven by a chain from the camshaft. Lubrication is of the wet sump type. Oil cooler and oil filter are provided.

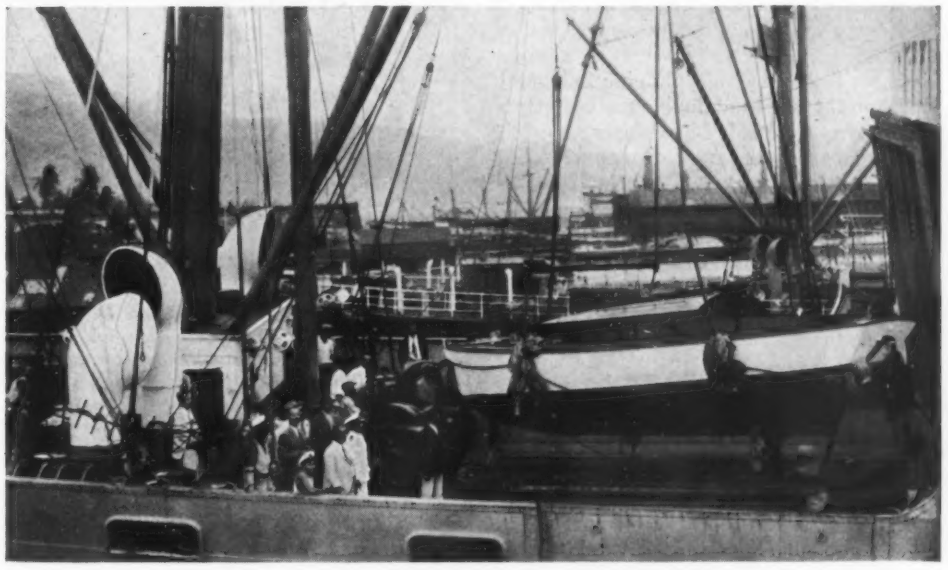
Fuel strainer is of the metallic element type while the fuel injection system embodies the latest type of plunger pump, nozzles and fuel transfer pump. Glow plugs, for starting in extremely cold weather, may be added at any time at slight cost. Water pump is a bronze gear pump, Kermath type. Electrical system is two-unit 24-volt.

J. T. Harrison's cruiser "Sheilohn" hails from Seattle. She is powered with an 85 hp. BMA 6 Buda engine

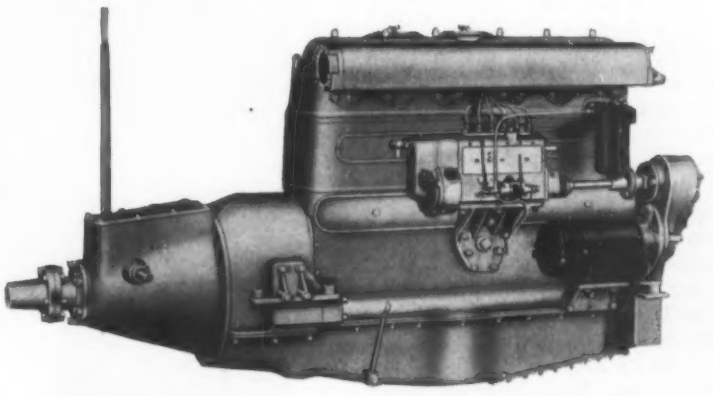
There is a large ball bearing reverse gear of ample capacity with double clutch for ahead motion, driving direct, and a double row radial and thrust ball bearing.

The net weight of the engine is 3100 pounds and its horse power ranges from 76, developed at 800 r.p.m., to 160 hp. at 1600 revolutions.

In general, the design of the 6–707 is similar to the other Diesels of the Kermath line, with the same features.



A Matthews "Sailer" goes foreign. These 26-foot auxiliaries have been shipped to many ports in this country and abroad. Here is one being unloaded at Kingston, Jamaica, B. W. I.



Right. The new Kermath 6-707, a 6-cylinder Diesel engine of 5″ bore and 6″ stroke. It develops 160 hp. at 1600 r.p.m. and weighs 3100 pounds

Propeller Standards

THE report of the committee of the Propeller Manufacturers Association, covering standard dimensions for propeller bore, etc., has now been issued in tabular form. The sheets include drawings and dimensions for propeller hubs, bores, keyways, taper, nuts, etc., for shafts of ¾″ to 3″ diameter, inclusive. The standards have been adopted by the association and have been approved by the S.A.E. Copies of these standard sheets may be obtained from the propeller manufacturers.

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Buoyant Cushions and Vests

An attractive exhibit at the recent Motor Boat Show was that of the American Pad & Textile Co., of Greenfield, Ohio. This firm displayed an assortment of cushions and life-saving vests of attractive design and finish, filled with Private Estates Japara Kapok, a mature fiber that affords the maximum buoyancy. It is said to be six times as buoyant as cork.

In designing and manufacturing its life-saving products the company is in close touch with the U. S. Steamboat Inspection Service. One model of vest made by it, approved by the government, is five pounds lighter than the cork-filled device and also stows well. It is soft and comfortable to wear

There is a permanent boat show at Fifth Avenue and 15th Street, New York, where Bruns, Kimball & Co. display row boats, runabouts, cruisers and engines

and does not allow the wearer to float face down but turns him on his back. At the same time he can swim with ease.

Another leader is the Stay-A-Float for children, a small kapok jacket, properly balanced, equipped with adjustable straps top and bottom so that it cannot become disengaged nor ride up over the wearer's head.

Buoyant cushions, made in many handsome designs, were also featured for use in boats of all types, from the canoe to the large yacht.

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Scripps Motors

The Scripps Motor Company, of Detroit, announces that its V-8 engine (a conversion of the Ford V-8) may now be obtained with oil pan of stamped steel, reducing the depth below the shaft line and permitting the engine to be installed lower in the boat at any angle up to 18 degrees. Aluminum cylinder heads are also available. For salt water use, however, cast iron heads and oil pan are advisable. The engine is offered with various combinations of heads and oil pan.

For cruisers and auxiliaries, the Scripps V-8 may be had with reduction gear. This is an extra heavy duty, straight line, double reduction, internal gear with ratio of 2.12:1.

A bulletin giving complete description, horse power data, installation diagram and dimensions, specifications, equipment list and prices may be obtained from the home office of the Scripps Motor Co., Detroit.

The company has also issued new bulletins containing up-to-date information on its marine engines which include information valuable not only to the owner but also to the boatbuilder. These cover the following: Series F-4 and F-6, 25 to 120 hp. in direct drive; Series 160 and 170, 90 to 186 hp., direct drive; Series 200, 103 to 212 hp., and Series 300, 146 to 316 hp. Another sheet gives in condensed form complete horse power data of every model and complete specifications.

An additional bulletin lists all models available with reduction gears, and gives the gear ratios, horse power, installation diagrams and important dimensions.

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The Newest Chris-Craft

At the Motor Boat Show, Chris-Craft announced a new line of cruisers 30 and 38 feet long. These new boats, known as Individualized Cruisers, will be built to order. They are planked with Philippine mahogany, single on the sides and double on the bottom, and have a round bilge forward which merges into a concave V-bottom abaft amidships. All models have rubber mounted engines and the engine compartments are sound proofed. The 38-footers have an enclosed engine room, completely sound-insulated, and fitted with electric blowers for ventilating the bilges. A wide variety of choice as to cabin arrangements, power plant and so on, is offered.

The ventilation of the standard Chris-Craft has been studied, and compartment vents, full opening windshields, tilting hatch covers, and cabin windows are planned to produce rapid air change.

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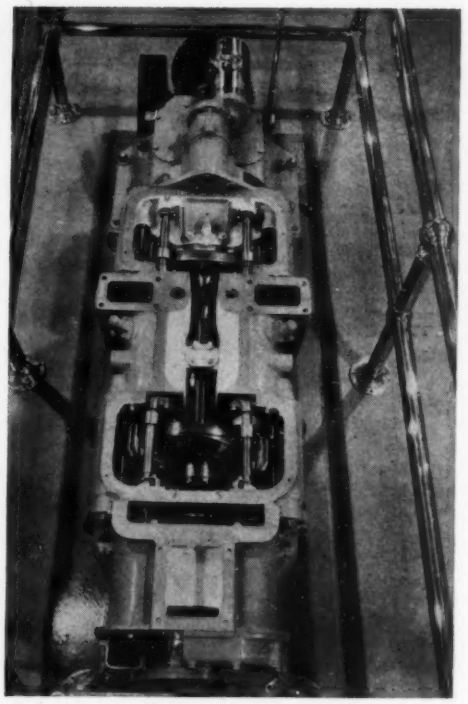
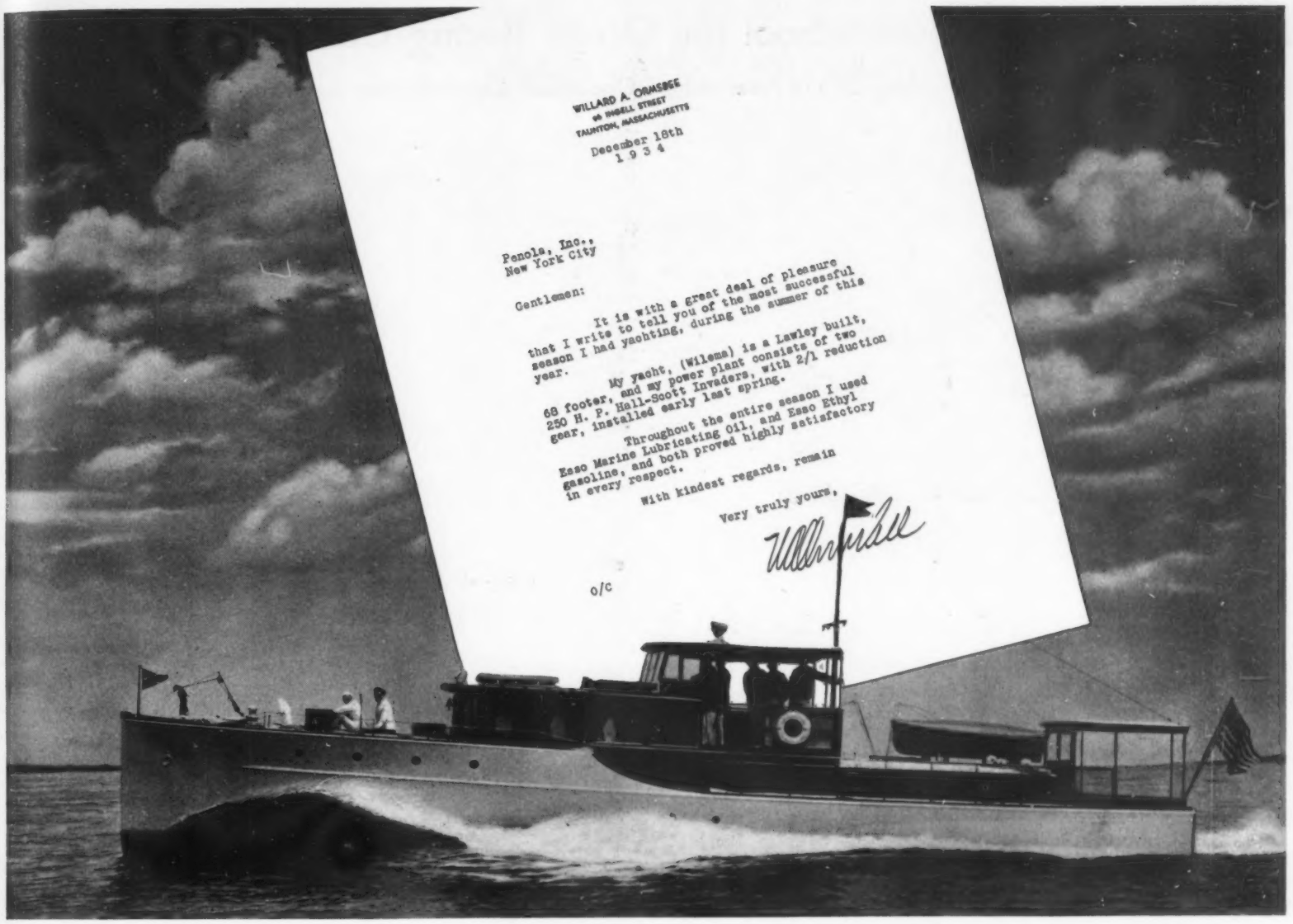
Dawn Cruisers

Dawn Cruisers, Inc., of Clason Point, New York City, announces the appointment of N. Erik Almen as sales manager.

The organization has resumed the construction of the well-known Dawn cruisers and is now offering several models, varying in size from 45′ to 55′ in length. One boat now building is a 48-footer, to be powered with a pair of the new Sterling crankless Diesel engines. She is scheduled for delivery about May 1st to her owner, Kenneth L. Taylor of Nantucket, Mass.



A pair of these Sterling crankless Diesels will go into the new 48-foot Dawn cruiser. Below. The 30-foot streamline cruiser, one of the 1935 Chris-Craft fleet


WILLARD A. ORMSBEE
98 RUSSELL STREET
TAUNTON, MASSACHUSETTS
December 18th
1934
Penola, Inc.,
New York City
Gentlemen:
It is with a great deal of pleasure that I write to tell you of the most successful season I had yachting, during the summer of this year.
My yacht, (Wilema) is a Lawley built, 68 footer, and my power plant consists of two 250 H. P. Hall-Scott Invaders, with 2/1 reduction gear, installed early last spring.
Throughout the entire season I used Esso Marine Lubricating Oil, and Esso Ethyl gasoline, and both proved highly satisfactory in every respect.
With kindest regards, remain
Very truly yours,
o/c

"..a most successful yachting season" –thanks to Essomarine!

UP and down the East Coast, yachtsmen know the *Wilema* as a fast and able craft. She's a real performer .. sleek, trim and capable.

Her log for last season indicates that it was especially successful. And her owner, Mr. Willard A. Ormsbee, gives much of the credit to Essomarine!

Early last Spring, Mr. Ormsbee repowered the yacht with two 250 H. P. Hall-Scott "Invader" engines. He specified Essomarine Lubricants from the start. It was "the most successful season I had yachting," Mr. Ormsbee explains in a letter, facsimile of which is reproduced above.

Hundreds of other boat-owners have discovered that Essomarine Lubricants are thoroughly *dependable* .. not only for routine use, but also for those sudden emergencies that demand the utmost in quality .. the final degree of stamina! That's why these skippers have standardized on products sold at the Essomarine sign .. the *specialized* lubricants produced to satisfy the specific requirements of marine engines.

Rely on Essomarine Lubricants during 1935 and you'll be *safe!* After overhauling this Spring, use the lubricants .. made and backed by the world-leader in specialized lubrication .. and *proved* by brilliant speed and endurance records in last year's grueling marathons. Ask for Essomarine! The answer is satisfaction!

Essomarine Oils are available in 1-gallon and 5-gallon containers and in drums and half-drums. Essomarine Greases are available in 1-lb. and 5-lb. packages and 100-lb. drums. The U. G. Lubricant is also available in 1-lb. tubes and 25-lb. pails.

ESSOMARINE ENGINE OIL—high viscosity index insures instant lubrication when cold, and maintenance of body under continuous high temperature. Available in 5 grades: Nos. 60 (SAE 30), 80 (SAE 50), 100 (SAE 50), 120 (SAE 60), 140 (SAE 70).

ESSOMARINE GEAROL 200—For independent oiling of reverse and reduction gears and oil-type universal joints. It adheres to gear teeth under all conditions, insuring perfect lubrication, cushioning and protecting against wear, and reducing noise.

ESSOMARINE U. G. LUBRICANT—developed especially for outboard underwater gears, open reduction and reverse gears, grease-type universal joints and ball bearings of propeller shaft or drive shaft. Unaffected by water. Contains no solid matter—no acids to pit or corrode bearings.

ESSOMARINE WATERPROOF CUP GREASE—For stuffing boxes, stern bearings, and all grease cup applications. An ideal packing for the water pump. Water, fresh or salt—hot or cold—has no effect on it.

ESSOMARINE BREAK-IN OIL—Refined and blended for high film strength and oiliness to protect the engine during the critical early part of its life. Recommended for use during the first 50 hours' operation in a new or rebuilt engine.

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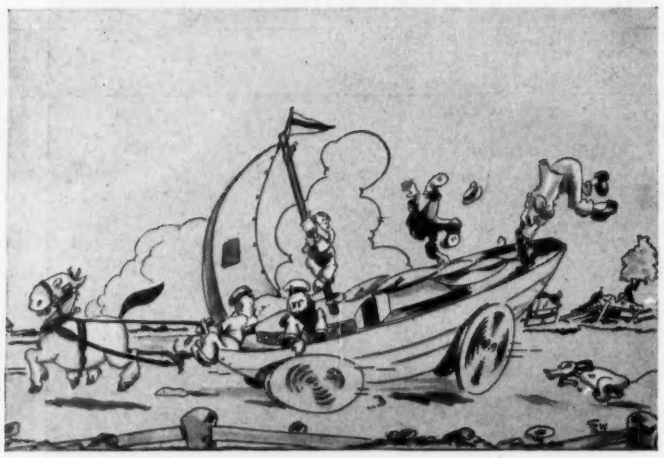
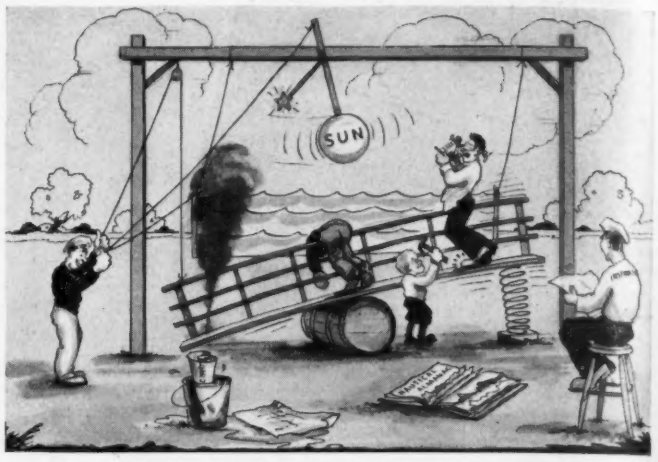
Essomarine Lubricants are distributed by the following major oil companies: STANDARD OIL COMPANY OF NEW JERSEY—COLONIAL BEACON OIL COMPANY, INC.—STANDARD OIL COMPANY OF PENNSYLVANIA STANDARD OIL COMPANY OF LOUISIANA—STANDARD OIL COMPANY (Inc. in Kentucky)—STANDARD OIL COMPANY (OHIO)—HUMBLE OIL & REFINING COMPANY—(In Canada) IMPERIAL OIL, Limited.

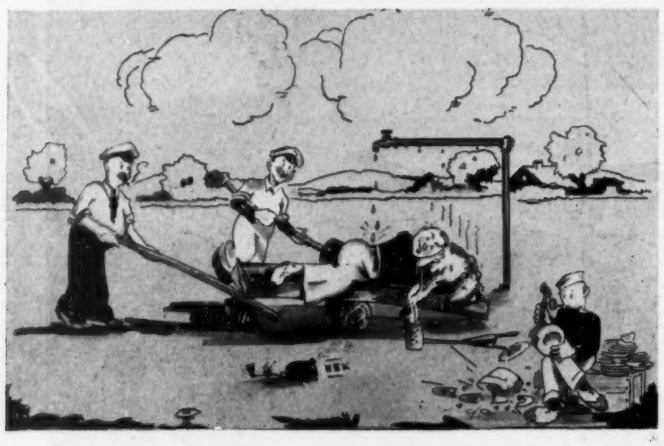
A Land School for Ocean Racing Crews

Suggested by the Cruising Club of America for a One-Month Course Prior to the Bermuda Race

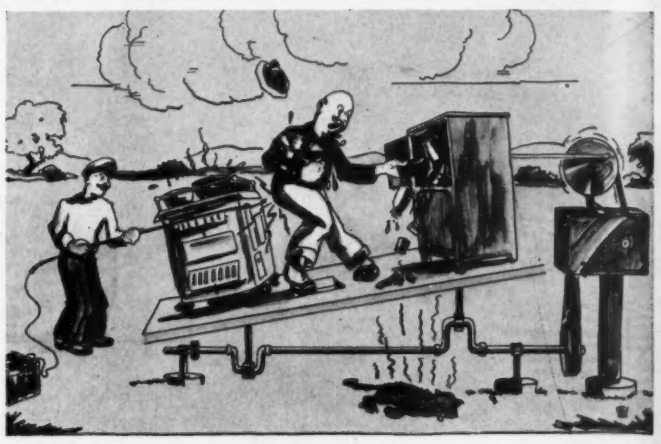


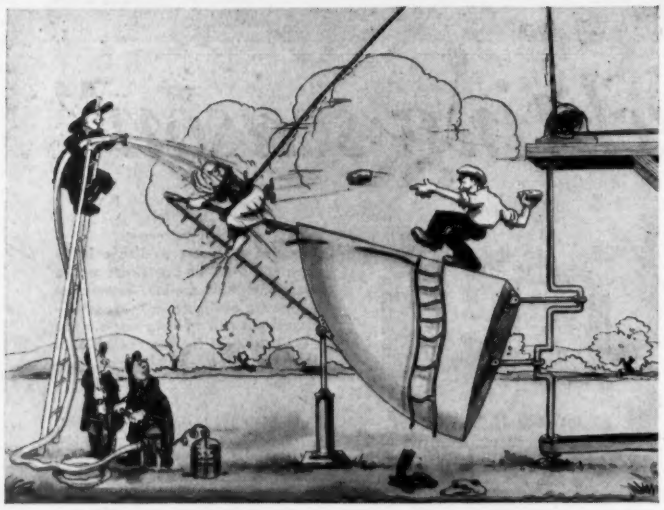
For hardening stomachs and enabling one to get his sea legs under him before starting, the contraption at the left has been patented, while for navigating efficiency the device on the right has many points to recommend it



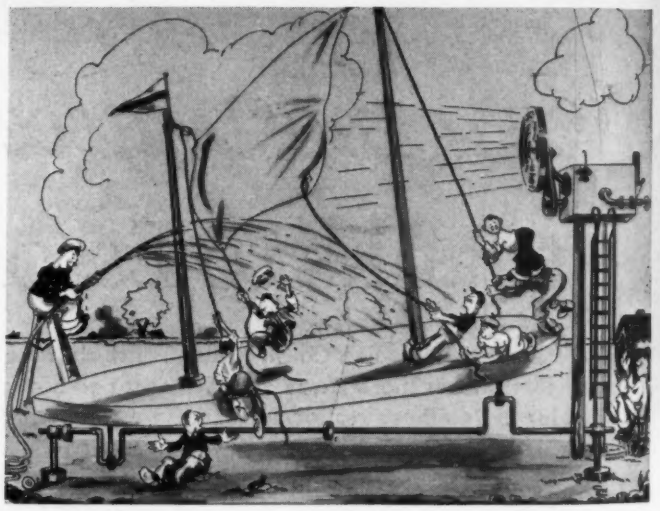


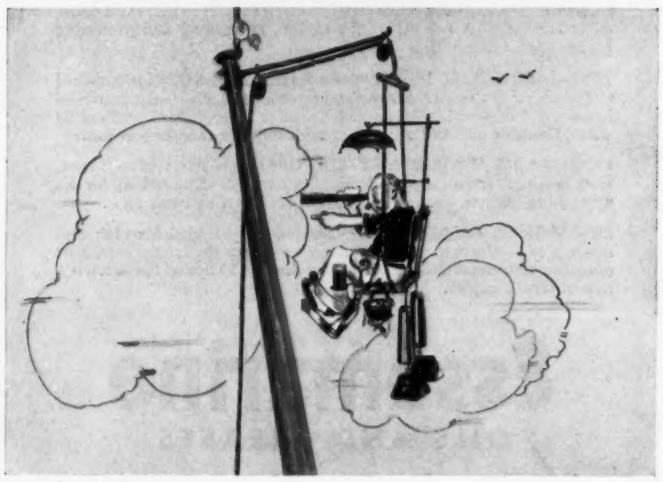
To sleep comfortably beneath a leaky deck, with a wet sheepskin coat for a pillow, one needs to be thoroughly broken in (left); while if you elect to serve as cook, a course on the moving platform at the right is recommended





For bowsprit work in a head sea, a very efficient mechanical section has been perfected that produces excellent results, and no more efficient sail drill for a staysail schooner could be devised than is shown at the right





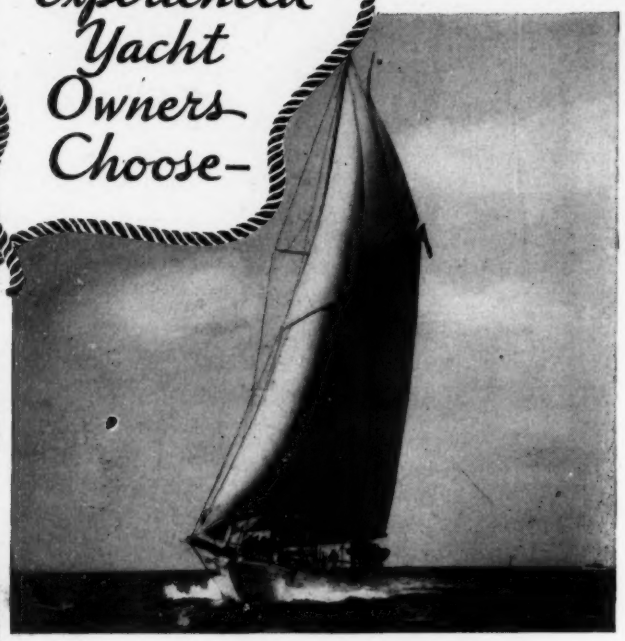
For the man who doubts the navigator and feels he must make the landfall himself, a 24-hour bosun's chair has been evolved, and the course ends with a lesson in the amenities when port is finally reached

these distinguished guests, too!

Each lends magic to the evening, for each reigns supreme. ⚜ **POMMERY** Champagne has been regarded for a hundred years as an unchallenged Queen: first to perfect the true "Dry" Champagne which revolutionized the tastes of the world, and first (in the opinion of perhaps the leading experts) today. ⚜ **CHAUVENET** Burgundies—selected and bottled by the great connoisseur whose signature they bear—include the most splendid wines that Burgundy affords. ⚜ **DENIS-MOUNIÉ** Cognacs are similarly precious: only four of the eight famous "zones" in the Cognac country grow grapes fine enough for Denis-Mounié to use. And Denis-Mounié will ship nothing under 15 years old. ⚜ So McKesson recommends to every host and every hostess these reigning monarchs of their respective realms.

FROM THE MOST FAMOUS CELLARS *in the world, McKesson has selected a group of international stars, each exemplifying the standards of perfection for which McKesson has been famous since 1833. Let "McKesson Quality" guide you!*
McKesson & Robbins, Inc., New York

McKESSON



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As the Atlantic Mutual recognizes brokers, it will be in order to send this coupon through your broker.

News of British Yachting

RECENT issues of YACHTING have been full of good tidings — tidings which are of exceptional interest to British yachtsmen. First and foremost comes the editorial reference to the generous recognition by the State Department of the United States of America of "Bobby" Somerset's gallant and skilful exploit in saving the lives of ten men from the schooner *Adriana*, which caught fire and was burned during the Bermuda Race of 1932. President Roosevelt's action in prompting this recognition is greatly appreciated by yachtsmen on this side of the Atlantic, and especially by members of the Royal Ocean Racing Club. The State Department's award could not have come at a more appropriate time, as Bobby Somerset has recently resigned from the office of Vice President of the R.O.R.C., a position in which he has rendered most valuable service to the club.

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Another item of news is of special importance to those interested in big class racing in British waters. "Spun Yarn's" announcement that Mr. Gerard B. Lambert intends to race *Yankee* here next season has entirely changed the outlook for Class J. What might have turned out to be a comparatively dull season now promises to be the most interesting for many years. The advent of a visitor from overseas is always welcome but, in the case of Mr. Lambert, who did so much to help Mr. Sopwith when the challenger was going through her trials in America prior to the Cup races, his visit constitutes the most welcome happening in yachting circles for many years. One is certain that, in Mr. Lambert's hands, full justice will be done to *Yankee* and, as this yacht is regarded as being *Rainbow's* equal, the interest taken in Class J will be unusually great. It will, I think, be found that *Yankee*, with her great size and power, will be well suited to the conditions she may be expected to meet with, especially when sailing in the more open waters at the Western regattas. The meeting between her and *Endeavour* is being looked forward to as the outstanding feature of the 1935 yachting season.

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A third announcement is one which more particularly concerns cruising and deep sea racing men, that there is to be a Transatlantic Race from Newport, R. I., to either Bergen or Oslo. Assuming that this race will be started early in June, as proposed, the competitors should have ample time to reach the Solent and be ready to take part in the Fastnet Cup Race. In the eight races which have been sailed around the Fastnet Rock, American yachts have taken part in four, and in three of these four the cup has gone across the Atlantic. The news that we may expect *Dorade*, *Mistress*, *Brilliant*, *Stormy Weather* and others to take part in the Fastnet Race, on the conclusion of the Transatlantic passage, should have the effect of inducing English cruising yachtsmen to make every possible effort to make the event an outstanding success.

The Sappers are giving *Ilex* a modern Bermudian rig, probably on the strength of the great improvement that a similar change of rig made in Nicholson's *Flame*. The design by Olin Stephens, which was published in the Royal Corinthian Yacht Club's book subsequent to the Club's R.O.R.C. rating rule competition, has been built to, and I understand that this yacht may be a Fastnet competitor. In addition to these two, Charles Nicholson is getting out a design for a 33-ton yacht to the Royal Ocean Racing Club's rating rule and there can, I think, be no doubt that she will be a starter in the big race as she is for that great sportsman, Isaac Bell, owner of the Fife-designed *Rosemary IV*.

There is, naturally, a good deal of speculation as to what the new Nicholson boat will be like but, so far, no information has been forthcoming. Of one thing one may be fairly certain, if Nicholson goes "all out" to get the most out of the R.O.R.C. rule and *if* there happen to be any weak points or loopholes in the system of measurement, he is pretty sure to find them. Of all ex-

Under Way— THAT'S THE TRUE TEST OF CRUISING COMFORT

HAVE you ever cruised on a Cooper-Bessemer powered pleasure craft? If you have, then you know what we mean by solid comfort. There's nothing else like it.

Owners, architects, and builders alike can tell you that Cooper-Bessemer Diesel power is noted for its smooth, quiet, vibrationless performance. But no amount of telling can produce the pleasurable sensation you will experience when you are actually under way. Even the first mile will convince you of the difference.

Luxurious rest is just as desirable on a 60-foot houseboat as on a 280-foot yacht. Cooper-Bessemer has made this possible.

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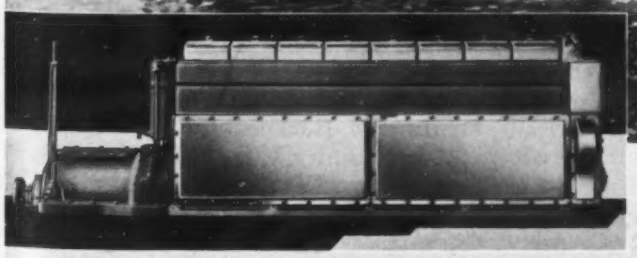

COOPER-BESSEMER TYPE BN MARINE DIESEL ENGINE. (Descriptive booklets are now available on the new Types EN and GN.)

The "Yorktown," owned by Howard Ferris, Jr., will be cruising in Gulf and Florida waters until spring. This cruising houseboat is powered by a 175 H. P. Cooper-Bessemer Diesel and is capable of making better than 17 m.p.h. Fuel consumption at cruising speed is 1.8 gallons per mile. The "Yorktown" is 60′ long, with 13′-4″ beam and 3′-0″ draft.

Because it's out of sight

Don't take it for granted. Be sure your propeller is the proper diameter and pitch and is in perfect condition. The comfort, economy and speed obtained through the use of the correct wheel justifies your attention. The Hyde dealer will gladly check it for you. Hyde Propellers are as efficient as propellers can be made. The metal is a special bronze that holds its pitch and is guaranteed not to shatter from impact.

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Bath, Maine

HYDE
PROPELLERS

Send for this free booklet "Propeller Efficiency." It will tell you why Hyde Propellers often increase the speed of a boat and always get home safely.

DEALERS EVERYWHERE CARRY AMPLE STOCKS

isting yachts Olin Stephens' *Dorade*, which is hit rather hard by the American rule, seems to get the most out of the R.O.R.C. rule, although her designer was in no way influenced by it. One expects, however, that, while going in for an easily driven hull, Nicholson will probably give the new boat more beam than *Dorade* in proportion to her length, that he will take the full "depth" allowed by the rule and that he will avoid any midship penalty or excess of midship sectional depth. I think, too, that one may also expect a fine entrance and run in connection with fairly short overhangs forward and aft. With the easily driven hull, she will probably have a relatively small sail area and the fullest advantage will be taken of the possibilities of the fore triangle. As to rig, it is probable that she will be either a Bermudian cutter or a Bermudian yawl.

\+ + +

The Royal Ocean Racing Club's Rating Rule has now been fixed for a period of four years so that there is more prospect of yachts being built to it than there has been in the past, but much will probably depend on the type of the new Nicholson boat, as well as on her performance when competing in deep sea events. The Bermuda and other long distance races have done so much for the design of cruising yachts in American waters that one is justified in holding the view that the building of some deep sea racing craft for our home waters may also be the means of effecting an improvement in cruising yacht design and equipment in this country.

There have been some changes in the Royal Ocean Racing Club which, however, will make no difference to its policy. The Flag Officers, feeling that they had carried out the work they had set out to do, decided to resign in a body, as they were of the opinion that it would be for the good of the club to make the change. Lt. Commander E. G. Martin has become Admiral; Major T. P. Rose Richards, Commodore; Captain A. Rosling, Vice Commodore; and Mr. W. H. Watkins, Rear Commodore; taking the places of Sir Philip Hunloke, Lt. Commander Martin, Captain R. Somerset, and Mr. C. Sherman Hoyt.

The Fastnet Cup Race is to be followed, after a few days to allow for a "re-fit," by a race from Plymouth to Belle Isle, an annual event which promises to be one of the features of the deep sea racing season.

M. Heckstall-Smith

\+ + +

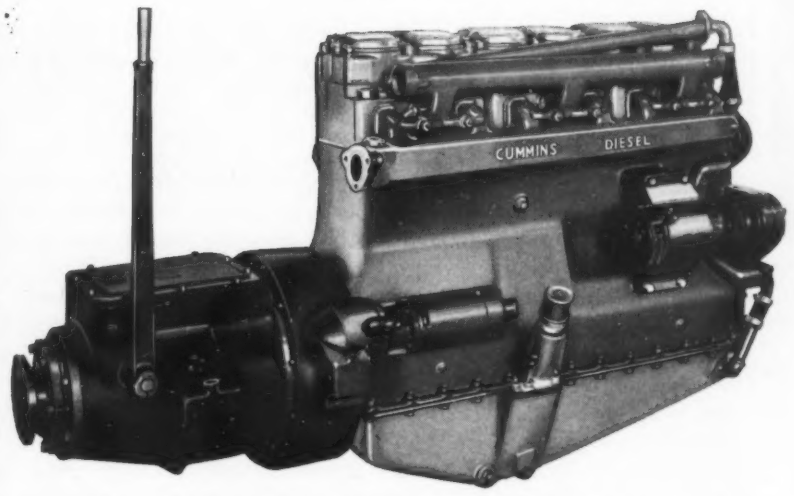
Many Entries for the St. Petersburg-Habana Race

OVER a month before the start of the annual St. Petersburg-Habana Race, scheduled for March 30th, many entries had been received for the sixth sailing of this event. The following entries had actually been received up to February 10: The 112-foot, three-masted schooner *Azara*, owned by Hugh M. Matheson, Miami; the staysail schooner *Venturer*, Edmund Spence, Clearwater; and the schooners, *Shellback*, Robert J. Newman, New Orleans, *Pagan Moon*, L. M. Harvey, Pensacola, *Sunshine*, H. S. Denniston, Mobile, *Lanakai*, Alexander C. Howe, Brooklyn, N. Y., *San Cristobal*, J. W. Pape, Ft. Lauderdale, and *Aloha*, C. R. Parks, Chicago; the yawl *Artimus*, Frank Chapman, Berlin, Wisconsin; the cutter *Game Cock*, Wm. B. Allen, Louisville, Ky.; and the ketch *Wilma Mae*, Henry Phillips, Chicago.

Probable entries include the schooners *Windjammer*, Garner Tullis, New Orleans, the *Antonia*, Harkness Edwards, Lexington, Ky., and the *Haligonian*, L. S. Ruder, Clearwater; the yawls *Sea Dream*, Tom Burns, New Orleans, *Irondequoit*, *Maralen II*, Kent Curtiss, Captiva, Fla., *Pieces of Eight*, Francis Bidwell, Tampa, *Eloise*, I. G. Archibald, Sarasota; the ketches *Marmion*, C. H. Baker, Miami, and *Vamarie*, Vadim Makaroff, Oyster Bay, N. Y.; and the cutter *Sea Gull*, Norman Brown, Tampa.

In the 1934 race, *Azara* led across the finish line while *Vamarie* was the first Class A yacht to reach Habana. *Haligonian* won in Class A and *Lanakai* in Class B.

There's no other Diesel like the Cummins Diesel



CUMMINS MARINE DIESEL Model "HMR"—6 cylinders, 100 h.p. at 1500 r.p.m. (Net weight, 2500 pounds.) Standard equipment includes reverse gear assembly and electric starting system. Also made in 4-cylinder size, 55 h.p. at 1200 r.p.m. CUMMINS also makes larger, slower speed Diesel marine engines from 75 to 200 h.p. and compact Diesel Generating Sets for marine service, from 20 KW to 100 KW.

● IF YOU WANT THE BEST in Diesel power for your yacht, cruiser or auxiliary—in engines from 55 to 200 h.p.—choose a CUMMINS Diesel.

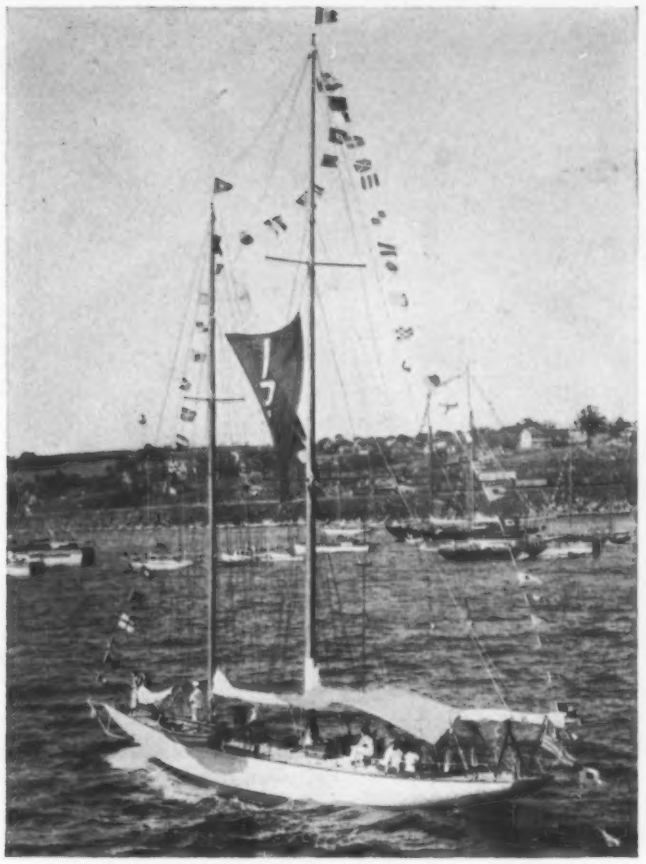
Then you will be assured of dependable, powerful, responsive engine performance that makes boating really a pleasure, and you'll get economy in operation and upkeep that no other engine can approach!

CUMMINS engineering advancements have made Diesel power the ideal power for owner-operated boats—far superior to gasoline power in simplicity, dependability and safety, and far more economical.

The CUMMINS Diesel embodies important *exclusive* features—instant starting; quiet, smooth performance at all times; maximum power; minimum fuel consumption; and dependable, trouble-proof operation.

More and more boat owners each year are choosing the CUMMINS Diesel as the outstanding engine in its field. Before you equip a new boat or replace an old engine, see the latest CUMMINS Diesels.

Sales and service by experienced, responsible dealers in many cities. Write today for complete information.



Schooner Yacht JOAN II—powered by a 4-cylinder Model "HMR" CUMMINS Diesel. 72'8" x 48' x 14' x 9'3". Designed by Paine, Belknap & Skene. Built by F. D. Lawley, Inc. Owner: F. Haven Clark, Boston.

LOW-PRESSURE FUEL CONTROL

● Ordinary Diesel engines deliver the fuel at high pressure—2,000 to 5,000 pounds or much higher—causing maintenance difficulties. The CUMMINS Diesel employs low pressure—only 75 to 130 pounds.

VALVELESS FUEL PUMP

● Ordinary Diesel engines employ multiple pumps and valves, making uniformity in fuel charges virtually impossible. In the CUMMINS Diesel, a single plunger and distributing unit, self-adjusting to engine speed and load, assures accurate, uniform fuel charges. No fuel waste. No detonation. Smooth engine performance at all times!

PRE-HEATED FUEL CHARGE

● Ordinary Diesel engines inject the fuel in the form of a cold, wet spray. In the CUMMINS Diesel, the fuel charge is preheated and gasified before injection—for fast, clean burning.

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● Ordinary Diesel engines are sluggish in starting. The CUMMINS Diesel starts instantly, because of the pre-heating method which begins with the first revolutions of the engine.

Yacht MARY ELLEN—powered by a 6-cylinder Model "HMR" CUMMINS Diesel. 55' x 15' x 4'. Owner: E. W. Reid, Magnolia, Mississippi.

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Engineering Products Company, 122 S. Michigan Ave., Chicago, Ill.
Equitable Equipment Company, 410 Camp St., New Orleans, La.
Diesel Motor Sales & Serv. Corp., 2331 E. 9th St., Los Angeles, Calif.
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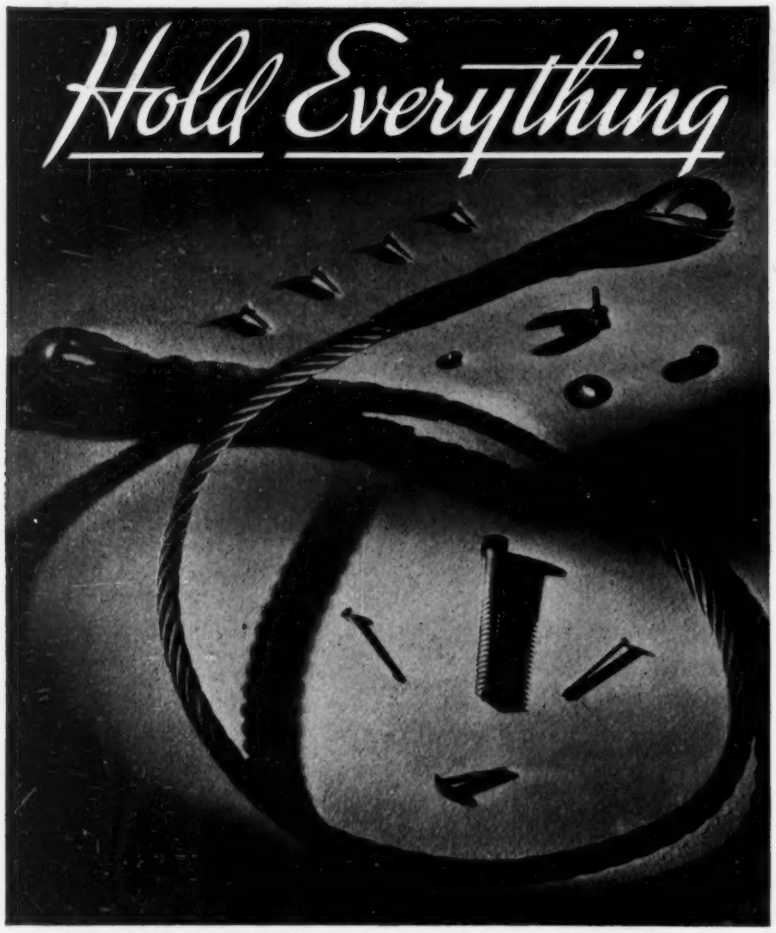

No rust can ever form on nuts, bolts, nails, screws, cotter pins and wire rope of Monel Metal. Prolonged exposure to salt water can never corrode them, never weaken them.

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MONEL METAL

● They're tough, these Monel Metal fastenings. Strong as steel. And the way they resist salt water corrosion is a sight to gladden mariners' eyes.

When you think of Monel Metal in connection with a boat, you're likely to think of her propeller shaft. But a nail, a screw, a bolt, nut or washer, *can* be just as vital to a boat's operation... and sometimes even *more* vital to her safety.

Monel Metal fastenings offer you more than promises, more than fair words: they confidently refer you to their record of *many years of active service.*

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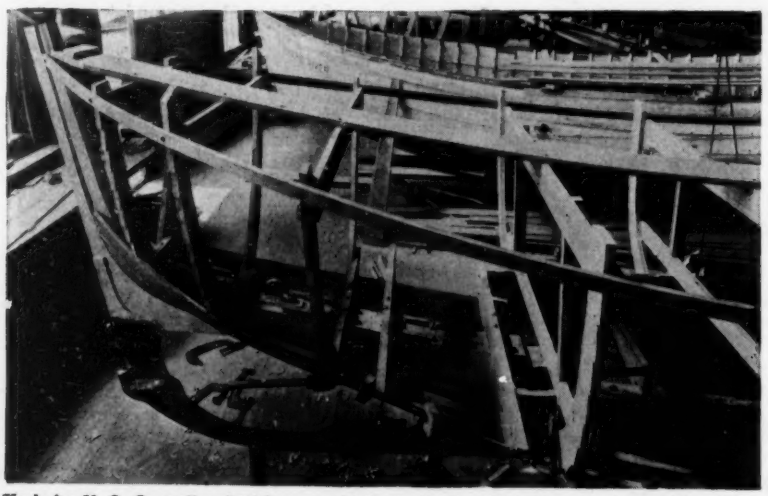

Keels for U. S. Coast Guard 36-ft. motor lifeboats showing finished stages of assembling keels, stems, stern posts, floor framing and engine bed stringers. All fastening bolts are made of rolled Monel Metal using also Monel Metal washers and nuts. Cast bronze skeg and keel attached with Monel Metal bolts. Rudder stock and lower pintle also made of Monel Metal.

IN THE WIND

PAUL SLOCUM calls it "boatitis" — that incurable delirium which manifests itself in those of us who, on being water-borne, experience a kind of ecstatic rebirth — the recapturing of lost illusions, vanished dreams, abandoned hopes.

Paul lives for the greater part of the year alone on an island in Lake Sebago. He is a collateral descendant of Captain Joshua Slocum and has a store of lively anecdotes anent that lonely and enormously resourceful navigator. One of them concerns the meeting of the ancient *Spray* with the U. S. S. *Oregon* at the outbreak of the Spanish-American War.

"At war with Spain," the *Oregon's* commanding officer signaled to the little sloop. "Advise you beware of enemy craft."

Captain Josh replied: "Thanks. Suggest we stick together for mutual protection."

An entry in the *Spray's* log (which is now preserved in the Library of Congress) reads: "Put into Siva to water and refit."

Three months later this entry appears: "Left Siva. It is said the women of Siva are very beautiful."

Despite a broken back, suffered when his plane was shot down during the world war, Paul Slocum is the most cheerful of men, whose only apparent disability is "boatitis."

\+ + +

Sharing the not-so-sub*lime*-light of publicity with the unspeakable Hauptmann trial was radio's great sea-lover, Phillips Lord, aboard the clumsy 4-masted lumber schooner *Seth Parker* in the South Pacific. When Lord first announced his intention of gratifying an adolescent ambition by circumnavigating the globe in a windjammer, broadcasting all the way, his faithful, gullible public settled back into their overstuffed parlor suites, prepared to accept the micro*phony* stuff in a spirit of earnest credulity. For a while it looked as though the *Seth Parker* would encounter no greater marine hazards than those which beset Cap'n Henery's Show Boat. Sea-lover Lord's dream voyage seemed about as authentic as Rudy Vallee bravely shouldering a saxophone and crooning his way through the United States Naval Academy. . . . Then, from the storm-tossed waters off Tahiti, came an *S O S* to the National Broadcasting Company in their palatial studios at Radio City. Phillips Lord and his hardy shipmates, it appeared, were waging an unequal struggle with the elements. The National Broadcasting Company, not being in a position to lower life boats and take off the *Seth Parker's* gallant little company of entertainers, did what it could in the emergency. It kept the radio audience informed of the progressive perils of their presumably dire predicament. . . . A British cruiser picked up the *S O S* without a suspicion of its theatrical implications. Proceeding under forced draft she made contact with the *Seth Parker* only to discover the loquacious Lord and company merrily broadcasting their woes from the security of a vessel which had not sustained a trace of damage in what had apparently been nothing more than a moderately heavy blow. . . . Lord, a little scared by the cold civility of the British Navy, apologized profusely, said the *Seth Parker*, due to the sudden change for the better in the weather, needed no succor. . . . The "sucker," accordingly, steamed away on her course, her captain vowing that if the regrettable incident should prove to have been a Broadway publicity stunt, the British Government would make official representations to Washington about it. . . . Next day the same cruiser received another *S O S* from the *Seth Parker*, supplemented by a message whose urgent tenor left no room to doubt that Lord and Company were in fact in a "spot" that had no place on a radio program. . . . Patiently the British commander swung his ship back on the reverse course, found the schooner badly battered, took off her crew with the exception of Captain Lord, his navigating officer and the radio operator. . . . Facetiously, Lord wirelessed NBC that he preferred to brave the wrath of the deep to the ire of the British cruiser's captain. . . .

CAPTAIN KIDD

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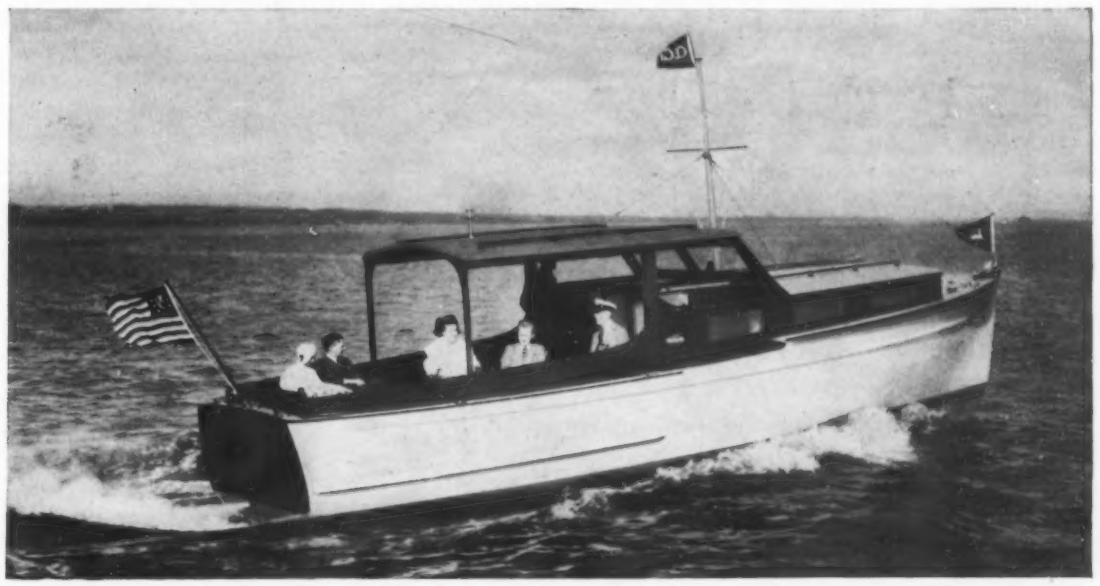
34-FOOT

CRUISER



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The cabin is exceptionally roomy, with four full-length berths, built-in book cases, lockers under the sofa seats, and extra large hanging locker. The galley has a 3-burner stove (fuel tank filled from outside), large icebox, and sink. The cockpit is nearly fifteen feet long, and is covered by a standing canopy, save for the aft-third. As standard equipment the entire cockpit can be enclosed with canvas curtains fitted with an unbreakable "window", giving an added saloon, or deckhouse. The space under the canopy can be permanently enclosed, as an extra, in mahogany and glass, and screens. The planking is all full-length, and the stern angle is of cast brass. With an engine of moderate size, the "34" operates economically at sixteen miles an hour.

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The LUX System is identical, even to the distinctive SHIELDED NOZZLE feature, except that manual or remote control valves are employed. Prices begin at $60.00.

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FOR ALL SIZES OF
RUNABOUTS, CRUISERS, AND YACHTS

News from Yachting Centers

Sound Waves

By LEE SCUPPERS

THE increasing popularity of overnight long distance contests for racing and cruising yachts of either auxiliary or purely windjammer persuasion, threatens to jam the Long Island Sound yachting calendar next summer unless some way is found to spread them over the season without conflicts in dates. The efforts of yacht clubs to provide interesting competition for the rapidly growing ranks of devotees of this phase of the sport may prove something of a boomerang.

Unless your observer has overlooked one or two, there are no less than twelve such fixtures on the books, and word was received just the other day that the revivified Norwalk Yacht Club will conduct a sort of double-barreled auxiliary handicap on June 29th and 30th. That means virtually a cruising race for every week-end in the season. H. S. Sayers, the mellowing stormy petrel of the Y. R. A. of Long Island Sound meetings, knew whereof he spoke when he suggested last autumn that the Y. R. A. appoint a committee to study the situation and make recommendations for the proper scheduling of such events.

\+ + +

A few months ago it looked as though the Timber Point Club, because of difficulties of one kind or another, would be unable to participate in the Great South Bay Yacht Racing Association's activities this summer. Something has happened to change all that. Now comes Bill Picken of Greenwich, Conn., and Sayville, L. I., with the news that George Elliott Morrison has offered a cup to be known as the Timber Point Trophy to be raced for off the Timber Point layout on Wednesday afternoons in June, July and August by the one-design knockabouts of the Timber Point Class. Picken, who is class captain, says that three boats that were in the hands of non-racing owners in 1934 will have new skippers in 1935 and that the class will be somewhere near top strength for the first time in years. Besides the special Wednesday series, the Timber Points will compete in the regular Saturday invitation regattas along the south shore and, of course, the annual race week series.

\+ + +

Robert W. Fraser, whose *Black Jack* won the Victory Class title on the Sound last summer, has just been elected vice commodore of the Manhasset Bay Yacht Club, but that does not mean that he will be relieved of his duties as chairman of the club's regatta committee. On the contrary, he has been reappointed by Commodore Egbert Moxham. Fraser's assistants will be A. Wright Chapman, another Victory skipper; William H. Taylor and Everett B. Morris, the yachting scribes; Fred Wright, a trapshooting chronometer counter; Allan G. Clark, the dinghy addict; Tom Fraser, an ice boat sailor; Robert Garland, an Atlantic Class skipper and ocean cruising man, and W. P. Stephens, the human yachting encyclopedia.

\+ + +

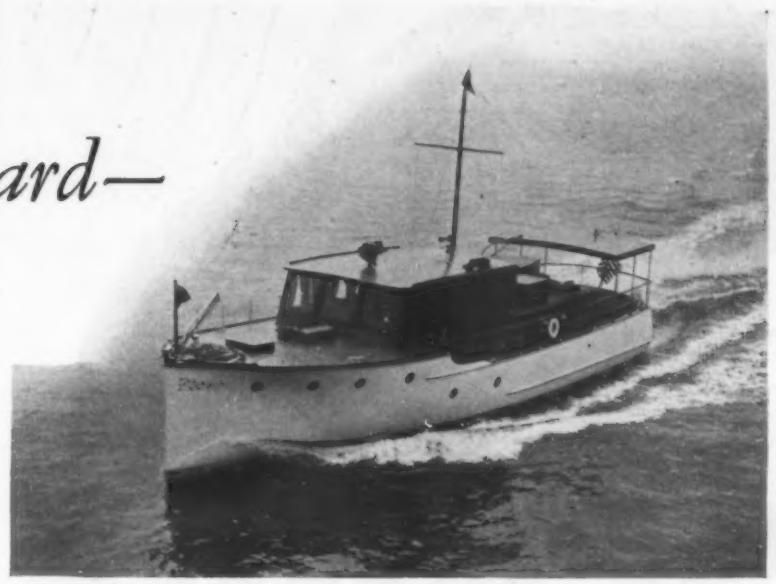
Alas for progress! The North American Dinghy Association's general board has ruled out Sid Herreshoff's new Class B dinghy rig as unsanitary. It seems that the Narragansett Bay yachtsman had adapted *Vamarie's* wishbone arrangement to his dink with such effect that he cleaned up his opposition in convincing style. Whereupon complaints as to the legality of the rig reached the ears of the august general board, which, in solemn convention assembled, ruled that: "the new Herreshoff boat with the triangular boom rig violates the spirit if not the letter of the 'B' Class rule which states that 'No struts or spreaders shall be

Careful—Sir

Don't Overlook the Vinyard—

The kind of a yacht you want calls for a rather sizable investment! So, in investigating where you will get the greatest value, don't overlook the Vinyard! Tradition has it, and present day prices forcefully demonstrate that, barring none, Vinyard Yachts are by far the greatest value for your investment. At first glance—the sweep of her lines, the grace of her hull give promise of exceptional safety and performance. Aboard—you'll appreciate her greater roominess, the comfort and luxury of her quarters, and the perfect good taste of her fittings. And hidden from view, there is a ruggedness of construction—stauncher, more thorough, longer living—that is the basis of the greater value per foot of Vinyard Yacht per dollar cost.

It will repay you many times over to wait till you've seen Vinyard. The first move is to look through our explanatory booklet. We'll send one at once at your request.



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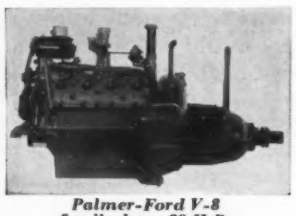
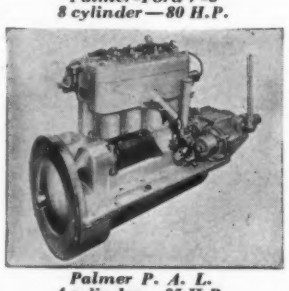
- How is she constructed? Is the keel one full piece, projecting under the twin propellers and rudder for protection?
- Is she wide enough in beam to be steady in a sea and yet not lose grace of lines?
- Are the motors mounted on stringers the full length of the yacht — and are they perfectly synchronized to reduce vibration?
- Are the workmen who build her paid by the piece (rapid production), or by the day (careful craftsmanship)?
- Is the refrigeration, and water supply entirely automatic?
- Is every part of the yacht accessible above and below deck? Are underwater parts oversized?

VINYARD SHIPBUILDING COMPANY

MILFORD, DELAWARE



Palmer-Ford V-8
8 cylinder—80 H.P.



Palmer P. A. L.
4 cylinder—35 H.P.

Palmer-Ford
4 cylinder—25 H.P.

Palmer-Hercules
6 cylinder—40 H.P.

PALMER CONVERSIONS *are real marine engines yet they* COST LESS

There is as much difference in conversions as there is difference in different makes of engines. For instance, compare Palmer Ford V-8 with any other Ford V-8 conversion on the market. Note the marine features on the Palmer job that makes it less expensive to install, more convenient to use and gives it longer life. Insist upon a Palmer Conversion. It is the only way to get Palmer marine features . . . and they cost less.

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Dealers in all important coastal cities

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CUSTOM-BUILT PROPELLER

GUARANTEES IDEAL BOAT PERFORMANCE

Designed exclusively to fit the particular needs of your engine and hull, the Federal-Mogul Equi-Poise custom-engineered propeller *assures* the absolute maximum in speed; completely vibrationless operation, and 100% resistance to blade distortion. Produced by the foremost propulsion engineers, built to give permanent peak performance, Equi-Poise costs more, but gives so much more in all-round efficiency that there is no comparison!

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Send Coupon for Complete Details

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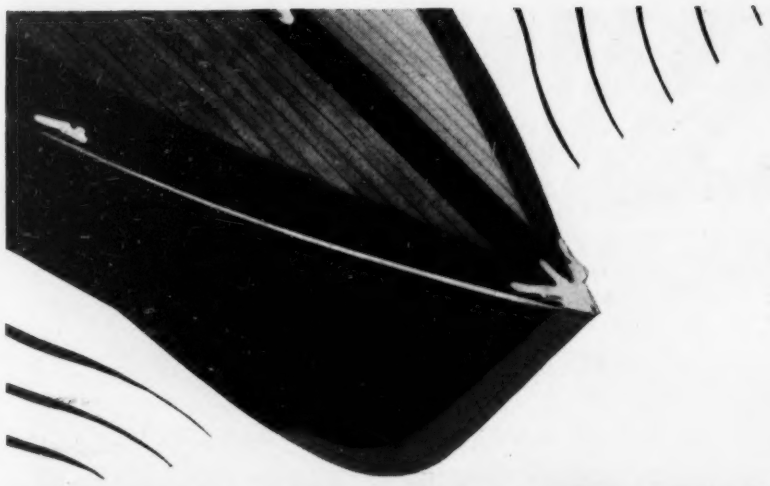

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SPAROX ● is the tried and proven easy-brushing, quick-drying Marine Coating for natural woodwork above the waterline.

● YOU SELECT THE TESTS
● YOU MAKE THEM ● YOU ACT AS JUDGE

HERE'S HOW: ●

Ask us to mail you a wooden panel partially coated with Stanley SPAROX. You coat the adjoining surface with *whatever* finish you consider your ideal.

NOW ●

Give the panel the hardest test you can devise ● Time, tide, sun, wind or weather ● as you will!

Whenever you shall say "enough" COMPARE effects! SPAROX goes to market on a basis of *sure SERVICE* rendition. You have seen SERVICE! Were we not sure, we would not dare this invitation to compare.

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THE MARINE COATING SUPREME

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The STANLEY CHEMICAL CO., East Berlin, Conn.
Gentlemen:
Send us one of your SPAROX coated panels. We will put it to test.
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By _____

allowed.' While this rig has demonstrated [*Ed. note:* And how!] its efficiency, the committee has no choice under the existing rules but to bar said rig under Article IV, section 3, paragraph F."

If you have a notion that you know anything about sea-lawyering, Lee suggests that you attend a meeting of the N. A. D. A. some time and find out just how little you really know about this gentle if somewhat vocal art. There was enough vapor generated at the motor boat show convention of the N. A. D. A. in two hours to drive the turbines of the *Europa* for a week.

\+ + +

Frozen harbors at the western end of Long Island Sound have raised the dickens with dinghy schedules for weeks, so the Sunday afternoon activities have been confined to trapshooting and ice boating. Even the latter sport, though, has been affected by tricky weather. There has been ice aplenty but every time a serious race is scheduled the wind seems to disappear. Larchmont tried to hold its club ice boat championship on Sunday, February 10th, but after Frank Campbell, the dinghy sailor, had won two races with his *Terror* the series was called off. There wasn't breeze enough to drive the boats through the mush that a two-day thaw had left on the top of otherwise sound ice.

Other Larchmont dinghy sailors temporarily addicted to ice boating are George Ratsey, Harry Hall, Dick Moeller and Drake Sparkman. Others, Dick Hill and Bill Inslee for instance, have fled these frigid climes for Florida where they are racing dinghies on Biscayne Bay.

\+ + +

A survey of the Manhasset Bay dinghy racing season from November until old Cow Bay took on the appearance of a skating rink, reveals that a total of twenty-seven different boats have participated in the weekly competition there, fourteen in Class A and thirteen in Class B. Dr. Gabriel Giannini, who is to quit the Atlantic Class this summer for a fling at the Interclubs with Howard McMichael's *Grey Fox*, won the Class A prizes in December and January with *Red Nose*. The November pennant went to *Walrus*, sailed by James Moxham. In Class B, old boats have the edge on the new BO's. Jack Prokop's *Opal* beat Bud Moxham's *Stingaree II* by half a point for the November championship, and Ted Clark's three-year-old *Eskimo III* topped the fleet in both December and January.

Narragansett Bay Gossip

By SPINNAKER LIZ

EVERYONE came back from the Motor Boat Show full of enthusiasm and fairly well satisfied in mind that it really was worth while. In spite of all the time, effort and salesmanship talks, to say nothing of answering the useless and silly questions which the novice poses, it was a success! And here is some of the proof!

At the Anchorage, of Providence, Bill Dyer sold 25 of his new 10-foot dinghies. Of course most of them are to be used as tenders, but after all, one of the requirements of a sailing dinghy is that she tow well. And to sell 25 in one week is the "proof of the pudding." One was sent to Switzerland, to Marshall H. Clyde to be used on Lake Geneva. R. B. Noyes, owner of the *Ayesha*, bought one; also Irving Sartorius of Miami, owner of the *Adriel;* Commodore Gidley of the Warwick Country Club; Arthur Carr who owned the *Marion B*, and Tim Parkman of Brooklyn. The latter will use his, perhaps, as a tender for his Stars. Henry B. Babson of Chicago who proposes to nest a 10-footer inside a 12-footer, thereby utilizing space and having two tenders instead of one, bought a "ten." A new "A" dinghy was sold to E. L. Raymond, Jr., of Rowayton, Conn.

\+ + +

The dinghy skippers are having a hard winter as Narragansett Bay harbors are frozen and there seems to be little chance of any racing this month. Peter Geddes has ordered an Alden dinghy

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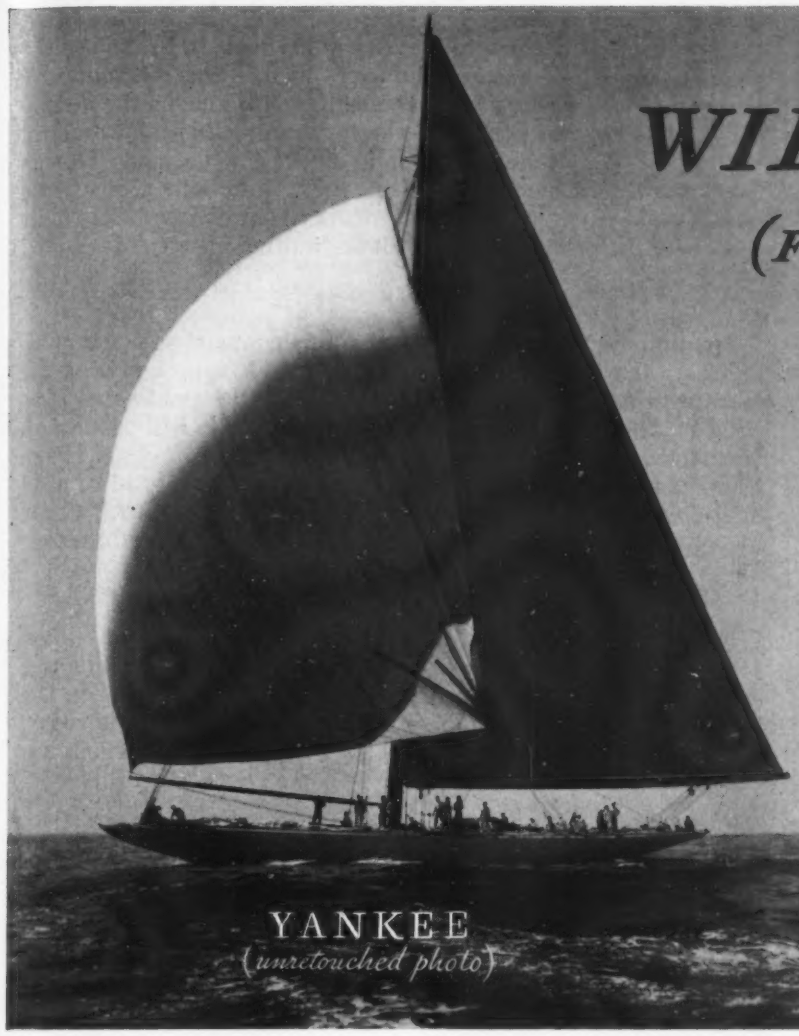
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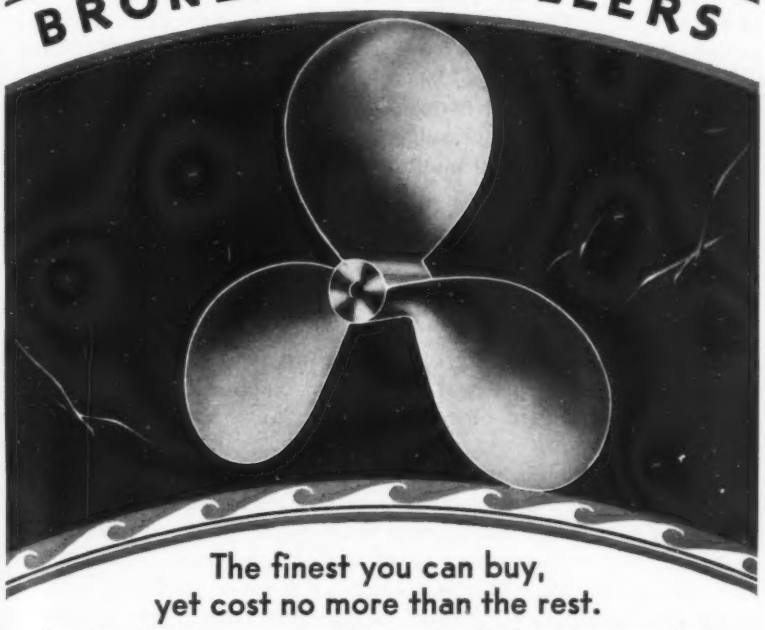

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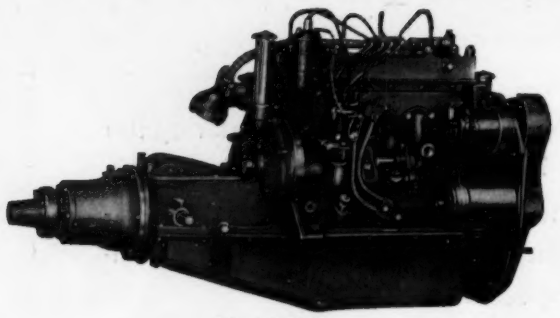

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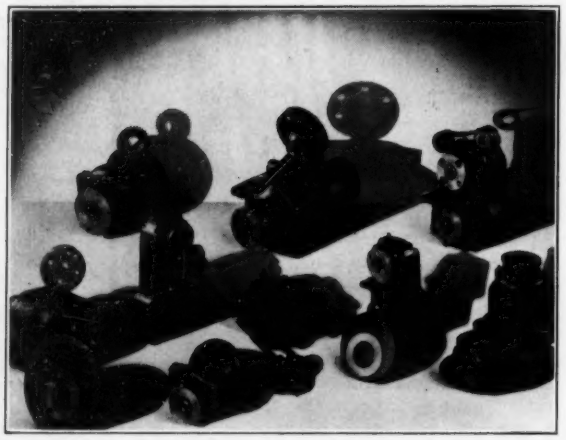

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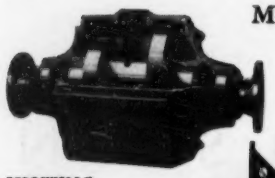

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like the *Fanny Dunker* to be built at Essex. Also, we hear that "John" himself is going to race one of his boats in Bristol, so the competition will be keener than ever. The ice boaters, too, have had little encouragement; even though the ice hinders the dinghy sailor, it is not quite safe for the ice sailors. But they are still optimistic. Ted Keiler has bought Jack Wood's boat; George Cook has a new one, and his son, Bill Cook, built a nice little model which carries a Snipe sail. Albert Alder of Warren has built a boat for Captain Russell and all are waiting for a good try-out.

\+ + +

Sparkman & Stephens report sales for the month of January as follows: The 43′ twin screw power boat *Xingu*, Lawiston H. Hazard to A. Stanley Simons; the 38′ Alden designed ketch *Hersilia*, F. Addeman Jenckes to Dexter Lewis, who will use her on Narragansett Bay next summer; the "S" boat *Eclipse*, Page Chapman of New York to C. A. Moses of Providence, to be used in Buzzards Bay; the Herreshoff 12½-footer *Squawk II*, C. A. Moses to Horace Drinkwater, who will use her around Cohasset.

\+ + +

At Herreshoff's, in Bristol, the new Twelve-Metre for William J. Strawbridge of Greenwich, Conn., has been laid down. She was designed by L. Francis Herreshoff and is 72′ over all, 44′ on the water line. She will be double-planked with mahogany and cedar, double-decked, and double-ended as was the *Istalena* which has been sold to Reginald Lanier of Newport.

BUZZARDS BAY

Furnans Yacht Agency, New Bedford, has sold a 28′ sloop to Alden Smith of New York, which is being built at Casey's yard. She is 23′ water line, 9′ beam, 4′ 3″ draft and has a "25" Kermath 4-cylinder motor. Several of this type have been built in the last few years. This firm has also designed a 32′ yawl for Bradford Weston of Quincy, Mass. She is 28′ on the water, 10′ 6″ beam, 5′ draft. A few of the George Lawley men are building this boat in Mr. Weston's own shop.

Furnans' have also sold the 73′ power cruiser *Sachem* which was built and designed by Densmore in 1930, to a Buzzards Bay yachtsman.

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Casey's yard, in Fairhaven, has about reached its building capacity. Two new boats, making a total of five, are in the process of construction. One of the new ones is a 33′ knockabout sloop, designed by B. T. Dobson for Patrick Sweeney of New Bedford. She is 27′ 4″ on the water, 10′ beam, and 5′ draft. Her specifications are white oak, all bronze fastenings, screws, etc. A Gray "Light Four" with reduction gear is to be used and she will have a lead keel of about 4900 pounds to be cast in one piece.

West Coast Bubbles

By WALDO DRAKE

MID-MARCH is due to find a brand new clubhouse of the fledgling South Coast Corinthian Yacht Club close to the launching stage on the outer end of the Santa Monica municipal pier.

Designed by no less an artist than Pierpont Davis, architectural Grand Prix winner and long time South Coast racing skipper, this newest of California clubhouses is of white Colonial clapboard design, reminiscent of many an East Bay homestead. Its completion will be the final link in a chain of modern yachting havens along the Southern California coast, from San Diego to Santa Barbara, and definitely places Santa Monica Bay and its lusty breezes in "the swim" as a sailing center.

Commodore Eugene Overton has been reëlected to guide the S.C.C.Y.C. again in 1935, as have his subordinates, Vice Commodore A. N. Kemp and Douglas Radford. A prime mover, however, in the long campaign to make Santa Monica a yachting

center has been Owen P. Churchill, owner of the Olympic champion Eight-Metre *Angelita*.

+ + +

Big sloop racing in California waters will be revitalized this coming season by the arrival from New York of the Class M sloop *Istalena*, purchased from William J. Strawbridge by Howard Hawks, of the California Yacht Club. *Istalena's* chief competition this season will be Charles Deere Wiman's Class M *Patolita*, ex-*Simba*. Mr. Hawks has for the past two seasons been racing the veteran Twelve-Metre cutter *Sea Hawk*, ex-*Irina III*. Reports are also persistent that Donald Douglas may change his 70-foot staysail schooner *Endymion*, Pacific Coast champion, to sloop rig this season.

+ + +

New "dinkster" champion of the California Yacht Club is Ed Munsey, of Los Angeles, who made almost a clean sweep of the club's third annual Sunkissed dinghy series, sailed at Wilmington in January and February week-ends, with his brand new *Half-Pint*. Ed's closest competitors were Dave Riehl, sailing *Wing Ding*, and Joe Fellows, Jr., sailing his 1934 champion *Flapper*. Turnouts were splendid for the series this year, there being a score or more starters in every race.

+ + +

Loretta Turnbull, California's champion woman outboard pilot, sailed from San Pedro in February with her father, Judge Rupert B. Turnbull, and Mrs. Turnbull, on a 6,000-mile cruise among the Hawaiian Islands aboard the family cruiser *Mary Irene*, converted Navy sub-chaser.

Lashed on deck was Loretta's Class C boat *Sunkist Kid XI*, in which she will race against the Islands' best drivers in a special regatta at Pearl Harbor in March. Later, the Turnbulls will cruise south to Palmyra Island before returning home.

+ + +

Edson B. Schock, Los Angeles naval architect, is designer of a unique 63-foot *Ning Po* type sailing junk now building in Shanghai for C. L. Seitz, San Francisco manufacturer living in China. With steel frames and wood hull, the junk is a centerboard model with a beam of 13 feet 6 inches and carries 1,900 square feet of canvas in a typical three-masted junk rig. She will be powered with a 100 hp. Gray motor, with reduction gear.

Mr. Schock also has building in Wilmington, for Ray K. Person of Long Beach, a 57-foot staysail schooner that will be almost a duplicate of Harold Dillingham's *Manuiwa*, winner of the 1934 San Pedro-Honolulu ocean race. The new schooner, to be ready in early May, will have a water line length of 45 feet, 14½-foot beam and will be Diesel powered.

A new addition to the California Yacht Club fleet in March will be the 40-foot cruising cutter *Kajay*, built by Neil Elliott at Culver City from Schock designs for J. J. Jakosky, of Beverly Hills.

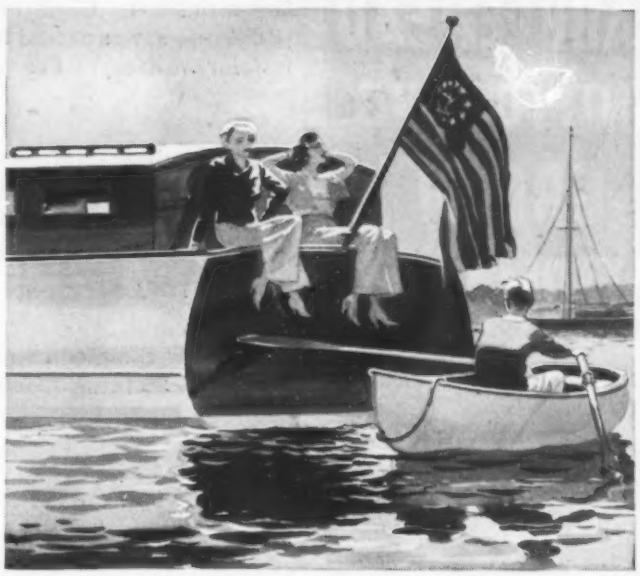
+ + +

Universal, California's first modern motor sailer, was completed in February at Fellows & Stewart's San Pedro yards for the personal use of Joe Fellows, Sr.

This trim 35-footer, designed by the elder Fellows himself, has a comfortable beam of 11 feet and sleeps six in two staterooms. She draws 3 feet 9 inches, has 2,300 pounds of outside ballast in an iron keel and 500 pounds inside, besides the weight of two 30 hp. Universal Flexifour motors, which drove her an easy 10 knots in trials. She sets 400 square feet of sail in a sloop rig.

+ + +

Harold Dillingham, Honolulu sportsman whose Pearl Harbor Yacht Club schooner *Manuiwa* won the 1934 Transpacific sailing race, was elected new commodore of the Transpacific Yacht Club at the annual February meeting in Los Angeles. Vice Commodore for 1935 is Christopher Jenks, of San Francisco; Clem Stose, of San Diego, is rear commodore.



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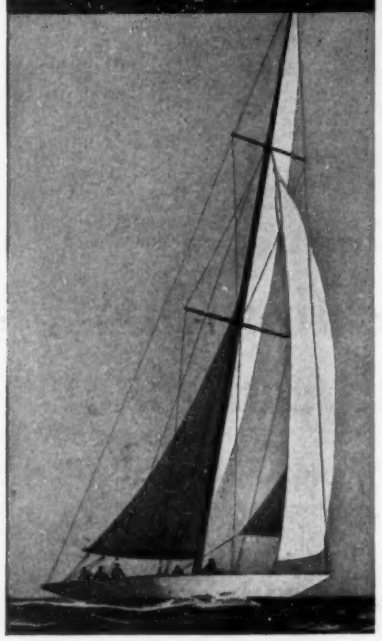

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Dr. Albert Soiland, organizer of the club, in which membership is restricted to Corinthians who have participated in Transpacific races, was named honorary commodore. Secretary for 1935 is John Wallace, of Los Angeles.

+ + +

The Southern California Six-Metre Association has been formed in Los Angeles, home port of nine of the Pacific Coast's twelve "Sixes." The first president is William A. Bartholomae, Jr., owner of *Mystery*. Alfred E. Rogers, owner of *Synnove*, was named secretary.

+ + +

The new commodore of the Pearl Harbor Yacht Club is John A. Balch. Retiring Commodore Earl Thacker was named rear commodore.

Massachusetts Bay Flashes

By ED EARLE

THE yachting season is ready to climb over the starboard rail as the winter doldrums slip astern around the frosted shore of the Bay. Lawley's Neponset yard is the scene of action as the Class J *Yankee* is slated to leave for English waters the middle of next month with her consort, the three-masted schooner *Atlantic*, flagship of Commodore Gerard B. Lambert of the Eastern Yacht Club, for a 44-race schedule in foreign waters.

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Overseas at Gosport, the *Yankee* will shake out of her seagoing, two-sticker cocoon and put on the most modern rig an American Class J boat ever wore. The famous welded steel mast, which measures 166 feet, 5 inches over all, is being built at Lawley's in four sections. The mast will be set up there for a perfect fit and then separated and shipped across.

+ + +

While the *Yankee* will be under new rig, she will have old friends aboard. Her designer, Frank C. Paine, of Belknap and Paine, will be in her afterguard and Charles Francis Adams will probably be at the wheel in some of her races. Sailing master Gust Olsen has returned from a visit to Norway to join the *Yankee* corps, and the crew which reports April first will be made up of veterans of the *Yankee* and *Vanitie*.

+ + +

Early next month one of the largest boats built in New England this year, the 63-foot auxiliary schooner *Skookum III*, designed by S. S. Crocker for ex-commodore James Dean of the Cohasset Yacht Club, will be launched at Britt Brothers' West Lynn yard. The new cruiser is complete but for the engine room where a change from a hand to an electric windlass has necessitated larger batteries and a new layout. At the same yard, the new 39-foot auxiliary ketch *Lands End*, from the board of Sam Crocker for A. Lee Loomis, is nearing completion. During the second week of last month work was under way laying her teak deck and installing a Gray engine with reduction gear.

+ + +

Willis Reid, the veteran Winthrop boatbuilder, returned fit as a fiddle from a vacation cruise on the Spanish Main and sailed with renewed vigor into the construction of the 39-foot over all auxiliary ketch *Brunette*. She is for a Boston yachtsman, and was designed by Crocker. The *Brunette* has been framed and her mahogany planking is under way.

+ + +

The efforts of the Thirty-Square-Metre Association should result in a foreign invasion from the Baltic this summer at Marble-

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head and Buzzards Bay. At the last meeting, Lincoln Davis, Jr., whose *Starling* won last season's championship at Marblehead, was elected president, and Paul Dudley Dean, secretary.

Two solid weeks of racing by the narrow-rigged "Thirties" is in the offing. A three-day series for the Roosevelt Cup will get under way July 24th off the Beverly Yacht Club, followed by an ocean race to Edgartown and the annual regatta off Martha's Vineyard. Marblehead Race Week would be the climax of the foreign invasion. The "Thirties" will not race for the Ladies' Plate this year and both the Eastern and Corinthian Yacht clubs will back up the Association in the matter of hull and sail area rules.

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One of the cheering results of the annual meeting of the Boston Yacht Club was the decision to retain the picturesque quarters at Rowe's Wharf. The headquarters of the senior yacht club of New England look over the busy harbor and the seagoing aroma of tar and hemp waft in to make it a delightful rendezvous. The annual cruise this year will point down the Maine coast instead of south of the Cape.

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A small 30-foot over all cruising knockabout is rising at Simms Brothers yard, Dorchester, for Newton G. Loud of Boston from the board of Sparkman and Stephens. She is designed for short cruises, with sailing qualities the important requirement. This boat will have an unusually good cabin with three pipe berths, toilet and galley, and will be powered with a Gray Sea Scout motor.

The sail plan gives a jib-headed rig of 420 square feet with permanent backstays, which will provide easy handling. Mr. Loud will use the boat on Massachusetts and Buzzards bays.

\+ + +

Graves, of Marblehead, is building five of the Alden 33-foot motor sailers, while Murray Peterson, of the North Shore yachting capital, is designing another *Coaster*, the third, a 41-foot over all schooner with a clipper bow like those of the first two.

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John G. Alden reports the sale of the a.c.f. 30-footer *Redlief II* to Fred C. Richartz of New York; the 33-foot auxiliary sloop *Primrose* to Dr. George C. Cummings of Portland, Maine; and the 26-foot Friendship type sloop *Sea Gull* to Fred R. Batchelder of Hampton, N. H.

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Through Alden's office the 35-foot auxiliary ketch *Sumatra* has been sold to Arthur B. Brenner of New York City. *Sumatra* is a sister ship to the ketch *Houqua*, well known in Boston waters. Alden also reports the sale of the 53-foot over all auxiliary schooner *Ptarmigan* to the Reverend Robbins W. Barstow of Hartford, Conn.

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Eldredge-McInnis, Inc., of Boston, report the following sales: The 46-foot motor sailer *Typee*, ex-*Water Witch*, to W. J. Underwood of Boston; the 34-foot Staples-Johnson Marblehead cruiser *Anntom* to J. C. Tuplin of Cambridge; the double-cabin Richardson cruiser *Arnole* to R. T. Cox of Boston; the Lawley 68-foot twin screw yacht *Rima* from G. B. Chipman of Washington, D. C., to M. P. Johnson of the Boston Yacht Club; and the 53-foot over all auxiliary schooner *Savannah*, built at City Island in 1933, to a Boston yachtsman.

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At the annual meeting of the Boston Model Yacht Club the following officers were elected for 1935: C. H. Farley, commodore; Francis Rich, vice-commodore; W. A. Wadsworth, secretary-treasurer; and J. A. Potter, measurer.

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John G. Alden 131 State St., Boston, Mass.

Fire Down the Bay

(Continued from page 41)

bigger. Pretty soon pieces of burning hay and grass, and then small branches, are blowing by. Margaret stands up on the other side of Joe, and all three of us try to see ahead, with tears in our eyes from the smoke and the wind and the salt spray. Then Margaret points up into the air. Up overhead, in the smoke and ashes, we see a piece of cloth going down wind end over end with the rain.

"Annie Mosely's petticoat," I shout to Joe.

"Lashin' must 'a carried away in the fire," he comes back.

Then the island itself looms up ahead of us, and the smoke is thicker than ever. The wind lets up a bit as we pull into the lee. Joe runs the *Katie* ashore under a cliff where the fire won't get to her. It looks like half the stuff on the island is blowing off over our heads, but it's calm on the beach.

The tide is still ebbing, so we leave the boat and wade ashore. As we run up a path over the cliff, Simpson and the others are beaching their boats on either side of ours. We stop and count them to make sure they've all made it. Gates is just unshipping his steering oar.

On the top of the cliff the wind hits us harder than we've felt it yet. The smoke pours past us like black fog, and the rain drives into our faces. We have to go along the path almost on our hands and knees, and we can't see where we're bound. Then we hear the crackle of the fire on our right. In a few more steps we come out of the smoke.

So far as we can see to windward, the island is nothing but a pile of soot and ashes beaten down by the rain. The fire is to leeward and to one side of us. The house and barn are not in sight but, if I remember right, they should be about where the smoke is. The fire must be almost on them.

We hear a hail, and there's old Mosely with his wife and three daughters huddled together like scared chickens not fifty feet from us. The old man comes over.

"Too late," he shouts at us. "The rain has slowed it down, but the house is about to go!" He points, and we can see the peak of the roof when the rain beats the smoke down. The fire burning the brush and grass isn't more than a hundred feet from the house.

Joe grabs me and hollers in my ear: "There's a clearin' around the house. If we start a bucket line we may be able to save it."

I agree with him, and we run back to get a bucket line started up from the beach. We meet the rest of the boys coming up the cliff, and they all turn back to get the crab tubs from their boats. That is, all but Pete Simpson. He has a little patent fire extinguisher in his hand, and he won't have none of our bucket line. I suppose it isn't theoretical enough for him. He goes on over the cliff.

We soon have a good weight of water going up to the fire. Joe bails it up. Margaret grabs the tubs from him and passes them to me, I to Gates, he to Herb Peevey, Herb to George, and so on. We don't envy the boys working up on the cliff in the smoke and wind, but they can't kick for want of water. We work at passing these tubs until we forget all about the run down the bay, or the trouble we may have getting home again. A full tub weighs close to a hundred pounds, and Margaret slams them at me until I begin to wish Joe had married a weaker woman. I heave them to Fred as fast as I can. The sweat is running off his nose in a stream as big as your little finger.

Word of the fire comes along the line in grunts and curses. It turns out that the night before one of the girls has built a beacon fire on the windward end of the island for old Mosely, who is coming down from Portland with a load of crab bait. She thinks she puts the fire out, but it smolders all night and in the morning springs up again and sweeps over the island with the storm behind it.

We keep passing these tubs, and they don't get any lighter. Then suddenly a couple of the boys come over the bank and down to the beach with Pete Simpson stretched out on a shutter between them. He is flat on his back with his eyes closed, and he looks deader than a salt mackerel, but they say he's still breathing. They

say he went up onto the roof with that little fire extinguisher of his and fell off right plumb into the fire on his head. He got pretty well burned before they could gaff him out. His son Paul jumps around on the beach and hollers like it's him that's hurt instead of Pete.

The boys who bring down Pete say that the fire is about petered out and that the house is only scorched a bit. That ends the bucket line, and Joe has a look at Pete.

"Won't do no harm to get him home as soon as we can," he says to me. Which means that the *Katie* is elected for the job, because everyone knows she's the ablest boat there.

But Paul commences to holler that Pete has said that none of our boats can get back to the mouth of the river, because our engines will get wet. That the rain and spray will drive in over the stern.

Joe doesn't pay any attention to this. He just asks the boys to help him get Pete and the shutter aboard. Paul goes on howling about how we'll all go to the bottom, but Margaret and Joe and I climb into the boat just the same, and the gang pushes us off.

The engine is still dry, and it starts right up, but before we get out of the lee of the island Joe and I put Pete's shutter on top of the engine box and lay Pete out on it. Then the three of us strip off our oilskins and pile them all over Pete and the shutter and the engine. In half a second we're soaked clear through, and the wind is whistling between our ribs.

Joe lets the *Katie* drive for the mouth of the river, and she goes like a scared cat. The spray hood balloons out with the wind that goes in under it, and the whole of the gale gets up behind us and pushes. It pushes water all over us so I have to bail, but it pushes us ahead, until it seems as though the engine is holding us back. Pete keeps dry and the engine does too, because it never misses once.

With the rain and the spray we can't see more'n a hundred yards in any direction. When I rise up to pitch the water overside, I keep looking for the island we should be passing, and I begin to wonder a little where we are. Then Joe points ahead, and there are the rocks at the mouth of the river with the spray and foam dashing over them. We've come up the bay about twice as fast as I think we have, and I haven't been thinking our anchor was dragging.

The tide is slack now, and the water in the mouth of the river isn't a great deal wilder than it is anywhere else. The *Katie* goes through like she's trying to run out from under us, and in a second Joe is easing her up to the dock.

Several folks come down to get the news. We tell them about the fire and that the other boats will be along before a great while. Then we pull the oilskins off from the top of Pete and pass him onto the dock. They lug him into his boat shop, and one of the kids runs up the hill for Doc Perkins.

As we run out to *Katie's* mooring Joe says to me: "Don't ever tell Pete where he rode coming home, because it ain't really theoretical to use a man's carcass for an engine cover."

\+ + +

A Long Voyage in an Eight-Tonner

NEW YORKERS may soon see the little auxiliary cutter *Driac II*, which reached Barbados on December 21st after a voyage across the Atlantic. She is owned by Commodore A. G. H. MacPherson of the Portsmouth Sailing Club. She left Portsmouth on September 6th, with her owner and two other men, bound for Madeira, where one of the crew had to return to England. The young man shipped to replace him was put on the beach at Las Palmas a couple of days later and another young fellow taken aboard. He was sick much of the way across the ocean and was finally sent ashore at Barbados suffering from enteric fever.

The little craft made runs of from 110 to 130 miles a day and was twenty days on the leg from Brava, in the Cape Verdes, to the West Indies. The voyage was made from Portsmouth to Madeira, Las Palmas, Dakar, Praia, and Brava.

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IN THE HEART OF PHILADELPHIA

"Carry Out the Kedge, Mister!"

(Continued from page 36)

ran it forward and out through the starboard hawse pipe, around the stem across a heavy stick of oak rigged as chafing gear, back through the port hawse hole, aft and out the port cat hole. Then we made the ends fast with two bowlines, taking care to stick lengths of timber in both knots so they wouldn't jam. This rig would put the strain on the *Wander Bird's* massive bow timbers. Furthermore, the strain would be one of compression, coming on the ends of the tremendously strong three and one-half-inch oak planking and the two-inch oak ceiling. No stronger rig could be devised. The ship would come off in one or a thousand pieces, but come she must.

Our hands were worked sore, callouses long ago shredded away and dissolved in the never-ending rain. The deck was a maze, knee deep, of hawser, wire and other gear. Patient negroes stood by the main winch brakes. The ship's small crew tended the stout winch on the mainmast to which led the manila lines of our own kedges.

It was again thick, palpable night with the sky pouring down maddening torrents of rain. But for her lights, electric and bright now that her main engines were going, the *Warrior* would have been invisible. Finally, everything was ready. The seven-inch hawser had come out of the sea and been bent to the bridle just astern of us. Our Morse light blinked "O. K." and back to us came the hoarse answering bellow of the whistle. The *Warrior* hove in on her anchors and, with incredible gentleness, eased by all the spring in 250 fathoms of manila and wire, the strain came to us.

A great silence settled over *Wander Bird*. The Bosun, forward, watched the stem, playing his flashlight up and down for any telltale sign of trouble. All hands, warned to stand clear, were out of the way of the tautening bridle. The next few minutes would tell the story. What would happen if the stem proved unequal to the test? Would not the bridle, thus released, sweep aft, taking sampson post, foremast, mainmast, deckhouse and steering gear with it before we could arrest the tremendous forces we were invoking? It seemed probable.

The hawser stretched out of the water.

"Are you moving?" queried the steamer with her stuttering light.

"No," we flashed back. "Heave away."

Shackle after shackle went in over the steamer's forecastle head, the advent of each one told us by her Mate's clear bell strokes from the bow. We remained, as unmoved as the eternal rocks themselves. The tension on the bridle was frightening. I went below to the fore peak, half expecting to find timbers and fastenings riven and giving. But there was not a sound. No creak or groan of tortured wood. Good old pilot boat construction! Built for the ages, this ship, for any strain the sea would give in normal combat and, apparently, even for any which carelessness and mischance might necessitate. I tried in vain to estimate the approximate strain we were under.

Then the steamer began bringing home her two huge hooks!

"Going to try main engines!" she warned. "Stand by!"

The hawser shrank visibly, and the *Bird* started smoothly to the westward. She went so slowly and with such velvety softness that we could scarcely believe she moved at all. But she was moving and, just as we were about to shout with exultation, there was a twang and a splash astern. The hawser had parted!

Surely, this would be the end of Captain Dunbar's patience, I thought dismally. It was after ten o'clock and he had worked his officers and men for five hours overtime with no expectation of reward. He had lavished gear on us, and he had failed. Well, now we would have to shift the ballast. It would take days but it would have to be done.

Then the distant Morse lamp was chattering again.

"Send boat," it blinked, "to carry out new line. We must shift berth again."

But for the certainty that now we would get off, and soon, the renewed labor of the next three hours would have been beyond us, I am certain.

Again the *Warrior* got her hooks and again she planted them strategically. Again we winched in hundred of fathoms of three-inch line which brought creeping over the ocean floor another and a new seven-inch manila hawser. Thanks to the *Warrior's* altered position, we had this time a span of 300 fathoms to bridge. This time, too, we had a heavier line to handle because the steamer had sent us, between the manila ends of the line, her five-inch salvage wire rope, a brutal cable, extremely heavy and designed for towing disabled liners in the

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heaviest of weather. All of this we now had made fast to a little schooner of 140 tons displacement!

It was all that eight men could do, aided with the power of a mighty winch, to drag that load up hill through the sand, weed and shell of the ocean bottom. But they sang as they toiled, and we poured grease on winch bearings, and eventually we had again the end of the hawser fast to the bridle.

As the hawser came aboard, the rain stopped abruptly and the clear tropic stars watched the swift finale of the struggle. Far away, the steamer hove on her anchors and her screw turned with slowly increasing speed. Silence and wonder descended on us as the longest towline we had ever seen stood up out of the sea to tell of the might of a 7000-ton steamer and her pulsing heart of steam and steel.

We went off with no slightest jar or bump. But suddenly, as if released from a bow, the *Wander Bird* shot off into deep water. Twenty-eight hours after standing we were again free through the incredible kindness of a Scottish sea captain and his men.

\+ + +

The following night the afterguard of the steamer were guests of honor at possibly the happiest party we've ever had in the big cabin of a happy ship. And it was after that party that Captain Dunbar spoke to me privately, thus:

"Captain, neither my officers nor mysel' but were delighted to help you yesterday, nor do one of us wish for so much as a ha' penny for our work. But there is our crew, and they have a richtful claim to salvage. They don't get much, puir devils, nowadays. For them I can't speak. Could ye spare a little somewhat for them?"

I started to speak, rendered somewhat incoherent by my gratitude, and the Scot misunderstood my fumbling.

"Mind ye," he went on hurriedly, "I ken full well all ye told me aboot your exchequer and I know 'tis true after seeing all I've seen, and I stand by my word. If ye no can afford a few pounds just say so. The Mate and I, weel, we'll figure oot a way to square it with the men — pairhops a spot o' overtime here and there for the rest of the voyage or summat the likes — but if ye can —"

I have rarely wished for wealth in the general meaning of that word, but that night I would fain have had bottomless coffers to open to that great Good Samaritan of the sea, and thankful indeed was I that I could double the figure the seaman estimated would please his sailormen, pitifully small though the entire amount was.

We spent a day cleaning ship. The oak chafing gear came off the stem, a groove twice as deep as a man's finger sunk into it by the grip of the bridle. Diving under the ship we discovered not even a sheet of copper started despite the furrow we must have plowed in the sand. Damage there was, irreparable, to my pride, but the ship was unscathed.

And then we made sail, slid down along the sea-scarred side of the *Warrior* while her men cheered us from the rail and her whistle spouted steam and sound, and stood away to the north and home, murmuring prayers which will never end so that the mighty gods of salt water will keep a kindly eye and protecting hand over the *Warrior* and her men wherever they sail.

From Miami to Nassau in "Vamarie"

(*Continued from page 65*)

SECOND ANNUAL MIAMI-NASSAU RACE

Start, 11:45 A.M., February 12, 1935, at Miami

Yacht and Owner	*Elapsed Time*	*Allowance* N. Y. C. Trophy	*Allowance* Class	*Corrected* N. Y. C. Trophy	*Place* N. Y. C. Trophy	*Class* A	*Class* B
Aweigh L. M. Bailliere	40:33:15	10:29:22	0:47:11	30:03:53	1	1	..
Game Cock Wm. B. Allen	45:14:22	14:08:36	4:26:24	31:05:46	2	2	..
San Cristobal J. Wesley Pape	41:39:45	9:42:12	Scratch	31:57:33	3	3	..
Vreda A. B. Lothian	44:32:56	10:06:04	0:23:52	34:26:52	4	4	..
Vamarie V. S. Makaroff	38:20:50	3:48:00	.....	34:32:50	5	..	1
Lanakai Alexander Howe	48:14:12	11:38:23	1:55:59	36:35:49	6	5	..
Esperanza S. W. Parish	44:01:22	3:32:48	.....	40:28:34	7	..	2
Azara H. M. Matheson	41:40:00	Scratch	.....	41:40:00	8	..	3
Four Winds J. O. & P. S. Whitman	66:15:00	12:09:38	2:27:27	54:05:22	9	6	..
Alibi L. D. Huntington	Time not taken						

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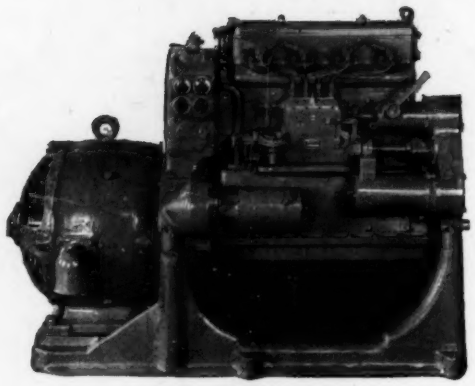

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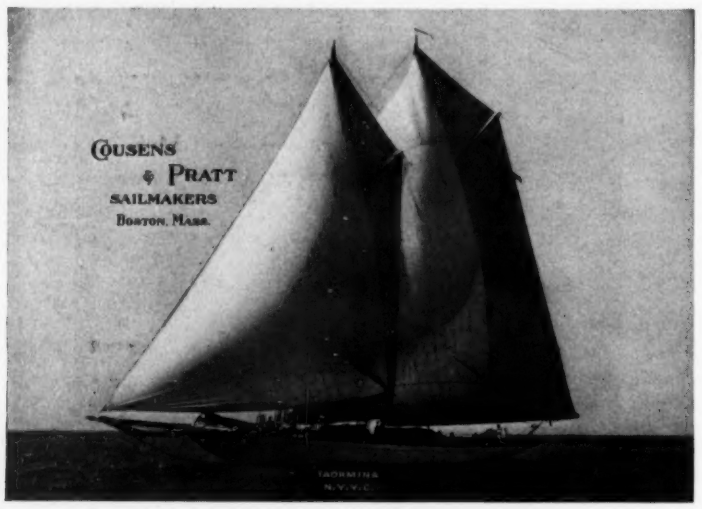

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"Incompetent, Irrelevant and Immaterial"

(*Continued from page 38*)

Q. — And their sights did not agree with yours by ten or maybe twenty miles? A. — I didn't say so.

Q. — By how many miles, then? A. — Two or three.

Q. — But even three miles is quite a long way, isn't it? A. — Not very far at sea.

Q. — But if you were steering for a narrow entrance and missed it by three miles, you might run your ship aground? A. — Oh, easily.

Q. — How often have you run boats aground? A. — My own boat occasionally in local waters.

Q. — You are not familiar with the waters around Norway? You have never been there? A. — No, but I have been to Sweden.

Q. — Were you headed for Norway when you ran aground in Sweden? A. — I didn't run aground in Sweden.

Q. — My mistake. You can't keep a boat off the bottom in local waters, and yet you expect to navigate our yacht to Norway. A. — That was my thought.

Mr. Jones: Well, he's your witness, Smith. I don't want him.

Redirect examination by Mr. Smith: Q. — Mr. Loomis, have you ever quit a race in which you were engaged? A. — No, but the Editor of YACHTING and a lot of the boys hope I will soon. They've been looking for a laugh for several years.

Q. — Do you — I withdraw that. Will the Norway race be run under the new racing rule of the Cruising Club of America? A. — I believe so.

Q. — Do you think this new rule is a good rule? A. — I think it's a fine rule. If I didn't think so I'd lose my editorial job.

Q. — Will you have a drink? A. — Will I!

Recross examination by Mr. Jones: Q. — Mr. Loomis, there are two or three questions I neglected to ask you. You said at the beginning that you could say "Skål." Have you ever been boiling drunk while navigating? A. — Not while navigating.

Q. — I didn't ask you about the other times. And you're not drunk now? A. — No.

Q. — And before you took the witness stand you were not beaten by the police? A. — No.

Q. — And your answers to my questions were given of your own free will, without intimidation on my part? A. — Yes.

Q. — And those answers reveal you as an incompetent, irrelevant and immaterial navigator? A. — Well, you're clever. I'll say that much.

Mr. Jones: Thank you. I wish I could say as much for you. You may leave the stand.

\+ + +

Well, Skipper, it looks now as a result of my testimony as if I wouldn't get to go in the race to Norway. But in my odd moments after finishing reading the murder trial in the morning paper and before the arrival of the evening paper I've been working up some navigational data on previous Transatlantic crossings. If you expect to have room for a serious article in the next issue, please stand by your check book.

Yrs., etc., ALF.

Cap'n Josh Slocum

(*Continued from page 46*)

deck would permit. When the punts were caulked and ready to be put overboard, the net webs were broken out and rigged, splitting knives were ground and old sails were cut up and made into tents for use on the beach.

With the bold Karluk headland and the volcanoes of the Aleutian range on either hand, the *Washington* sailed through Shelikof Strait and arrived off Kasilof River after a passage of 49 days from Sydney. Cook Inlet, in 1871, was as yet imperfectly known to navigators who had to depend mainly on very sketchy Russian charts and to proceed with great caution. It was always safer to anchor in times of doubt, and to send out a boat to sound and explore in advance of the ship. It was the customary thing to do.

To secure sufficient depth of water, the *Washington* had to be anchored about two miles out on an extensive flat which fills the bight between Cape Kasilof and the mouth of the river where the fishing was done. The shoals and flats were strewn with huge glacial boulders, many of sufficient size to show above water at depths of thirty feet. In this precarious berth the vessel was protected as much as possible from the tidal currents, which at this point had an ordinary velocity of five knots; also she

derived additional protection from the shelter of Karluk Reef, a shoal just outside on the five-fathom line.

The *Washington* was then snugged down, by striking the to'gallant masts, against the williwaws that swept down from the mountains with great force and made her snap at her cables, which were veered out to the bitter end. But these heavy gusts were not as trying as the northwest gales that were prevalent in this early part of summer. The Inlet is practically a glacial fiord forming an indentation of 200 miles. The spring tides were now running, and here, with the single exception of the Bay of Fundy, the tidal range is greater than in any other part of the world, the extreme from the highest to the lowest being forty feet. This was nothing new to the Captain who was familiar with the terrific Fundy bore.

While the crew were landing gear and erecting camp, the *Washington* dragged her anchors during a gale and stranded. Being in ballast and flying light, she was driven high upon the beach; the sand afterwards banked up outside her and it became impossible, without a dredger, to get the doomed vessel off.

I have heard my father say, in speaking of this disaster, that it was reported to him the next year that the sand dunes were piled up so high on the seaward side of the vessel that it seemed impossible that she had ever been afloat.

The loss of the vessel, important as that was, did not dampen the morale of the expedition. The thing had to be seen through. A landing party was formed and everything taken ashore that could be converted into living quarters. To do this, there was an abundance of material in the way of spars and heavy sails.

Kodiak, the nearest port, was two hundred miles away, and this it was finally planned to reach in the ship's two boats and a 35-foot whaleboat which my father at once started to build at the camp. The little matter of building a boat in time of need never bothered him. As the carpenter had three mates on the job, besides the constant supervision of the Captain, the boat progressed fast enough to be finished by the time the party was ready to leave the beach.

Indians were worked in on the fishing while the rest of the crew split and salted down the salmon in barrels, and as the fish often reached a weight of eighty pounds each, it did not take more than two to a barrel. The Indians had traps of their own along the river and they soon became expert in the use of the white man's gill-net.

The fishing was carried out successfully, except for the loss of the vessel, which caused an awkward problem in the transportation of the catch to San Francisco. Kodiak was the nearest place to obtain help, and there my mother was taken in safety and comfort by a revenue cutter which appeared on the scene. The Captain would not accept any other assistance, but determined to remain at Kasilof until everything was finished and the catch made ready for shipping. He figured that if a vessel could not be found at Kodiak, he could, at least, return for the catch next year. It was practicable to take the crew back in the ship's boats, now that they had been supplemented by the large whaleboat which had been built for the emergency.

To keep off Indians and bears, Thompson, one of the crew, volunteered to stay behind and watch the catch. As he had plenty of ammunition at his disposal and plenty of game roamed inland from the camp, he no doubt thought he could make good use of his time.

The small boat voyage out of Cook Inlet was largely a matter of tide work, and it was necessary to land on the beach and camp between stages. The party, according to one of the crew, lived on smoked salmon and hardtack, which he considered to be a hardship, until they reached the end of the voyage. The Captain had charge of the big whaleboat while the Mate and Second Mate had charge of the other two. The start was postponed until the spring tides had diminished and then, on a high water slack, the boats were shoved off the beach and a start made for Kachemak Bay, which, by the aid of a brisk northerly breeze, was reached before the flood set in. That was more than a quarter of the distance to be traveled.

Another stage took them to a cove under the lee of Cape Elizabeth. By this time the sailing conditions had become more normal. From there they made the run across the mouth of the inlet to a cove at Afognak, near Marmot Island. Here camp was made, over night, and then came the final run to Kodiak. Here two sealing schooners with empty holds were found and these were at once chartered to go to Kasilof for the catch of salmon, while all hands left for home soon after in the bark *Czarevitch*, which had come to Alaska for a cargo of natural ice.

(*To be continued*)

Smart or Shabby

which way will your boat wind up the season?

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How to Gauge the Ten Best Skippers

(*Continued from page 30*)

other during a season's racing or in some special series. Disablement or disqualification have ruined many a championship standing, yet few yachtsmen remember such incidents at the end of the season when the round table discussions bring up the question of supremacy in this or that class. As an illustration, I can recall one instance in which a boat I know was disabled three times in the same season due to swinging spreaders. Other boats in the same class were dismasted from the same cause, and the fault was not corrected until the class committee permitted the use of fixed or solid spreaders. Yet this same boat had a splendid record in first and second prizes and would have come out on top of the heap had the score been based on first and second places.

In all boats except those sailed by one man, the crew has great influence on performance and accounts for many points added or subtracted from the final score. It is obvious that the effect on the skipper of a regular, well-trained crew, always on board and prepared, is quite different from that of an irregular, inexperienced, and disorganized outfit. An efficient crew which sails together repeatedly means complete relaxation for the skipper and the opportunity to concentrate on the race. With a mediocre or picked-up crew the skipper is compelled to give every order himself and "conversational" racing usually results. This all consumes energy and affects the skipper's observation and judgment. Mistakes from which there may be no recovery are often the result.

The majority of races are won by making the fewest possible mistakes and not by any great degree of superior skill, as is commonly thought. The top men in the game are only barely able to inch past other good men in speed through the water, but these few feet per mile may be offset or lost by the slightest error in judgment, or any one of a dozen mistakes that may be made tactically, such as tacking too soon, overstanding, etc. Another influence which very definitely affects some racing men is the counsel aboard, and many skippers absolutely depend upon another individual for suggestions to "dope the race," and are lost without this coöperation.

I have often answered the query "Who is the best skipper?" with a vehement denial that any one man stood out in this all round capacity, but that there were a dozen or more good ones. The only way to settle such a question would be to have one grand elimination series, all leading skippers to compete in about 20 to 25 small one-design 30-footers (Interclubs, for instance), boats to be allotted or chosen out of the hat just before each race, two races a day, morning and afternoon, rain or shine, every day throughout the entire month of September. This sort of grind would show a thing or two, I venture, and would probably shorten the lives of a few good men into the bargain. At any rate, a cross section of the requisites of a good racing skipper would show up here. It would show who had skill, judgment, nerve, endurance; who could go without sleep, and who could stand the strain; who remain good natured and sportsmanlike; who can stay up all night and still be a good fellow. Lacking this display of aquatic fireworks, the above suggestions are made to help in forming a clearer opinion of what makes reputations in the mind of the average yachting enthusiast.

If some of these statements seem a trifle harsh or hypercritical, pause to consider that this is written strictly in the interest of the game, for "the game is the thing." Every observation is based on experience derived in racing competition as a helmsman. To support my contentions somewhat, I might add that I have raced, among others, against every man mentioned in the list of "best skippers" made up by Commodore Henry L. Maxwell. Incidentally, I consider Commodore Maxwell one of the best tacticians in yacht racing. His observations are all the more valuable and impartial, because, when not actively racing himself, it is his custom to follow the fleet around the course under power. In this way much data can be secured that normally goes unrecorded. I have raced in over 400 contests in the Sound Interclubs generally conceded to be the toughest class in numbers and competition on Long Island Sound. Therefore, I feel that this experience (not counting years of activity in practically all the racing classes on the Sound) is a sufficient basis upon which to form a fair opinion of the qualities necessary to achieve a yacht racing reputation based on pure merit.

Havana's Mid-Winter Star Series

(*Continued from page 64*)

showed little in the way of variety.

On the afternoon of the team race the wind moderated and the sea fell off. That race was sailed over a leeward and windward course and proved to be the most interesting of the series. Shellens went out into an early lead with *Gavilan III*, pulling the rest of the Cuban team with him. It looked for a time as if, after nine years, the tables were about to be turned and that Cuba would win. *Pathfinder*, however, caught *Gavilan* at the next mark and Sam Smith carried the Cuban skipper off to sea, while *Ace* and *Jupiter* caught up. At the home mark they were all bunched again, but *Ace* and *Jupiter* kept their slight lead and, just at the finish, Smith again came into the picture by taking out two more Cuban boats, while Elwood White took *Shucks* across the line, to give the Americans a 24 to 12 point victory over the Cuban quartet.

It was a pretty battered and bruised band of Star sailors that attended the final banquet, that night, in the great marble hall of the Habana Yacht Club. Rafael Posso, recently elected Rear Commodore of the International Star Class, presented the prizes before a capacity crowd that filled the spacious hall. Cuban hospitality knows no equal the world over, nor could the visitors from the North say enough for their hosts.

Adrian Iselin has now won the Internationals, the Mid-Winters, the Spring Championship at Nassau, the Bacardi Cup several times and — except for the Olympics — almost every major and minor honor the Star Class has to offer. The *Ace*, though her face has been "lifted" more than once since she won her gold international star, a decade ago, has been his constant companion through the years and has visited, with him, many distant ports. It is safe to predict that when the starting gun resounds across Bermuda waters, on April 10th next, that Iselin and the *Ace* will be at the line, ready once again to bring fame and glory to Western Long Island Sound, cradle of the Star Class, with which fleet Iselin has been racing for over twenty years.

The summaries are as follows:

International Star Class

Habana, January 28th–31st

MID-WINTER CHAMPIONSHIP CUP OF CUBA

Yacht	*Skipper*	*Fleet*	*Fin.*	*Daily*		*Pts.*
Ace	Adrian Iselin	Western L. I. Sound	1	2	1	17
Aurrera	Miguel de Sena	Flota de la Habana	2	4	4	11
Jupiter	Edwin Jahncke	New Orleans — Gulf	D	1	2	11
Pathfinder	Sampson Smith	Lake Otsego	3	3	5	10
Halcon	A. Garcia Tunon	Flota de la Habana	D	5	3	6
Shucks	Elwood S. White	Western L. I. Sound	4	6	6	5

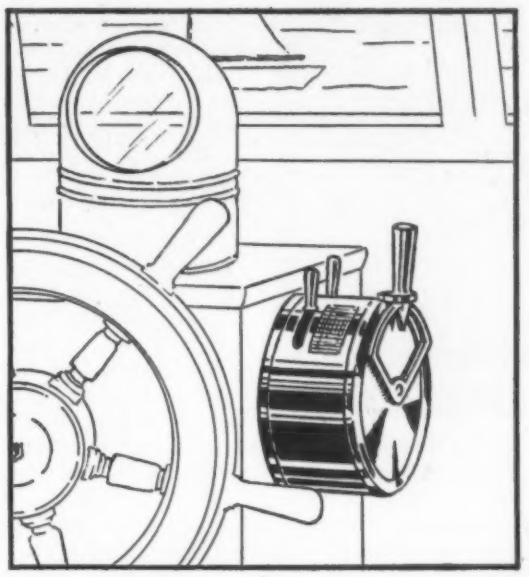
BACARDI CUP (OPEN) SERIES

Yacht	*Skipper*	*Club*	*Fin.*	*Daily*			*Pts.*
Ace	Adrian Iselin	Port Washington	1	1	2	4	38
Jupiter	Edwin Jahncke	Southern	3	4	4		31
Halcon	A. Garcia Tunon	Habana	2	2	8		30
Pathfinder	Sampson Smith	Cooperstown C. C.	4	7	3		28
Aitorito	Angel Naya	Miramar	6	3	5		28
Santa Elena	John Muhlfeld	Habana	9	8	1		24
Gavilan III	Peter Schellens	Miramar	10	6	6		20
Mosquito	Mario de Armas	Habana	12	5	7		18
Kurrush	Carlo de Cardenas	Habana	7	10	9		16
Mara	Fernando Bru	Habana	8	9	10		15
Jibaro	Cesar Fuentes	Miramar	5	11	D		12
Shucks	Elwood S. White	New Rochelle	11	12	11		8
LIA III	R. Karman	Habana	W	..	..		0

D — Disqualified. W — Withdrew.

INTERNATIONAL TEAM RACE

Yacht	*Skipper*	*Team*	*Pts.*		*Pts.*
Jupiter	Edwin Jahncke	U. S. A.	8		..
Ace	Adrian Iselin	U. S. A.	7		..
Gavilan III	Peter Schellens	Cuba	..		6
Shucks	Elwood S. White	U. S. A.	5		..
Pathfinder	Sampson Smith	U. S. A.	4		..
Santa Elena	John Muhlfeld	Cuba	..		3
Halcon	A. Garcia Tunon	Cuba	..		2
Aitorito	Angel Naya	Cuba	..		1
			—		—
Total Points U. S. A.			24	Cuba	12



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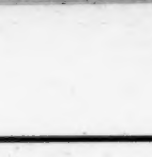

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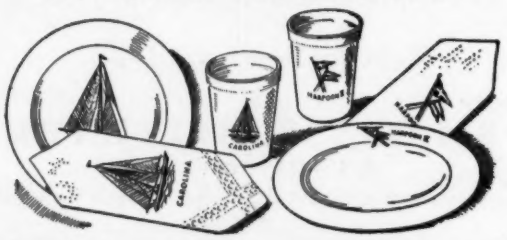

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I Discover Handicap Racing

(Continued from page 42)

Non-starters are treated as if they had finished second.

Like all time allowance systems, this one had its faults. For instance, in several races we were all becalmed close together for over an hour, in which time the allowance of *Riptide's* competitors went up by four or five minutes. On the other hand, in one race, in which *Riptide* covered the course in fast time, yielding small handicaps, the wind went flat just as she finished, which gave her an unmerited victory.

Everything considered, however, the system is a good one, but certain changes would be an improvement. There should be a maximum time on which to base percentages. This time should be twice the estimated fastest time possible for the scratch boat. *Riptide's* best time over the Larchmont course was 110 minutes. Therefore, a maximum time of 220 minutes, or 3 hours 40 minutes, should be used, even if it took the five-hour limit to sail the race. Also, in classes in which one or more boats must always "allow" over five minutes, such boats should be started five minutes later so as to "bunch" the finish.

Handicap racing has two great things in its favor. It permits racing between auxiliaries and non-auxiliaries on an equitable basis. Also it is not overly expensive, as there is no great premium on upkeep, such as new sails and frequent haul-outs. Moreover, it teaches one a lot as to the speed of one's boat. After a few races I could predict quite accurately the time when we would round the next mark and whether we had saved our accrued handicap at various points of the race.

In closing, I would say that handicap racing is surely not as interesting as one-design racing, but it is much better than open-class racing — if you have the slower boat. It offers a haven of refuge for racing yachtsmen whose classes have "petered out," and I can strongly recommend it to them. As long as the depression continues, handicap racing should gain in popularity. After that — a deluge of new yachts.

"Give Them the Air"

(Continued from page 48)

to keep water from coming in with it is quite a problem. Various forms of traps and baffles have been devised, some quite effective, others absolutely useless in practice although they may look well on paper. If the water is to be separated from the air, the mixture must enter a comparatively large chamber where its velocity is slowed down, the water allowed to drop out and collect in the bottom of an appropriate reservoir from which it drains overboard before the air passes down into the hull. I have never seen any separator, no matter how many baffles were employed, which had any appreciable value unless the principle of a fair sized expansion chamber was made a part of the scheme. Two of these devices are shown in Figure 4.

Ventilation within the interior of the boat from stem to stern is quite as necessary to prolong the life of the hull as it is to give comfort to the crew. Damp and stagnant air will accelerate rot. Any part of the hull which is enclosed and cannot be ventilated is certain to show rot before many years have passed. This is particularly true at the ends, both bow and stern, and around built-in ice boxes. If the fore peak is separated from the rest of the boat by a watertight bulkhead, a large hatch or manhole must be placed in the deck and must be opened whenever possible so that the air in the peak will have some circulation. The same is true in the restricted space under the deck of a boat with an overhanging stern.

The necessity for proper ventilation in the ends of the boat is one reason why many builders dislike to fit a watertight bulkhead to separate the fore peak from the rest of the hull, as the owner is far too apt to neglect to open the hatch or manhole in the fore deck.

Ventilating the boat when under way, particularly a motor boat, is comparatively simple. A very effective scheme of increasing ventilation when the engine is running is suggested in Figure 5. In this method we take advantage of the velocity of exhaust gases and cause them to induce an air flow in the ventilating duct which may be carried to any desired part of the boat.

Figure 6 shows what may be called a pipe dream. For a long time I have wished to try out an automatic pump which would take advantage of the motion of

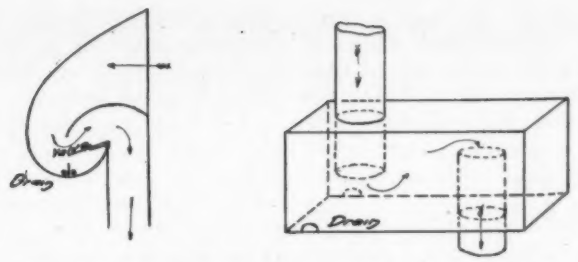


Figure 4. The water trap shown on the left is a patented form of metal trap with a valve to shut off the air. No slowing down of the air by expansion is allowed for. On the right is the simplest — and best — water trap, a box on deck with the air entering at one end and leaving at the other. The larger the box, the more effective

the boat lying at a mooring, the motion being caused either by wind waves or by the passing of other boats in the harbor. It is exactly the same principle as that employed on a whistling buoy which draws in air through an inlet valve as the buoy rises on a wave, compresses it and expels it through a whistle when it sinks. A box of this character about two feet square could be made fast to the mooring buoy and left there when the boat is in use. When the boat is left at her mooring, the box is attached to the stem by a light line and the suction hose carried down into the bilge under the engine to keep the bilge free of any vapor. The amount of air pumped would be small but in any busy harbor the pumping action would be fairly continuous. The same sort of device might be incorporated in the boat herself provided the inlet to the box, placed preferably at the stern and well to the side, were of liberal size and protected by a scoop facing aft. No valve should be fitted at this inlet.

Within the last few years mechanical ventilation for pleasure boats has received much attention. Several small and very efficient units are now on the market in a wide range of capacities. The essentials of the system consist of a cowl outlet through which air is discharged by an exhaust fan driven by a spark-proof electric motor. The motor is entirely isolated from air or vapor passing through the fan and duct. The suction line leading to the fan should be carried to the point where vapors collect.

If the boat has been idle for some time, this fan should be operated for five or ten minutes before the motor is started. In this way all dangerous vapors are removed from the bilge and, even if the starting switch should give off a spark or if the commutator of the starting motor did a little sparking on its own account, there is no danger whatsoever.

Few small yachts under sixty feet are fitted with forced or mechanical ventilation for parts other than the engine room, natural means being resorted to. However, the rest of the boat can be made much more habitable if the galley range is effectively hooded and the air exhausted from the hood by a fan. There is little value in attempting to ventilate the whole galley by mechanical means. It is much better to localize such ventilation to the hood over the range itself and in that way ventilate the whole galley. Toilet rooms, also, should be ventilated by an exhaust rather than a pressure system but the cabin spaces are more comfortable if pressure ventilation is used.

Careful studies have shown

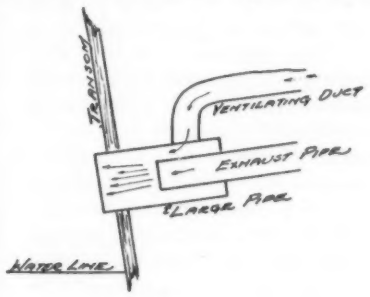
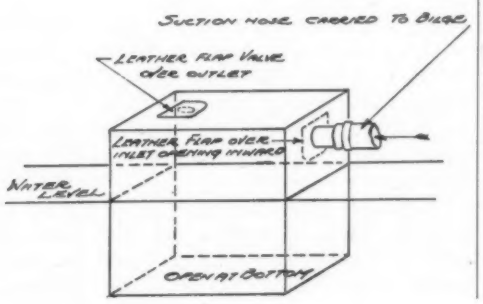
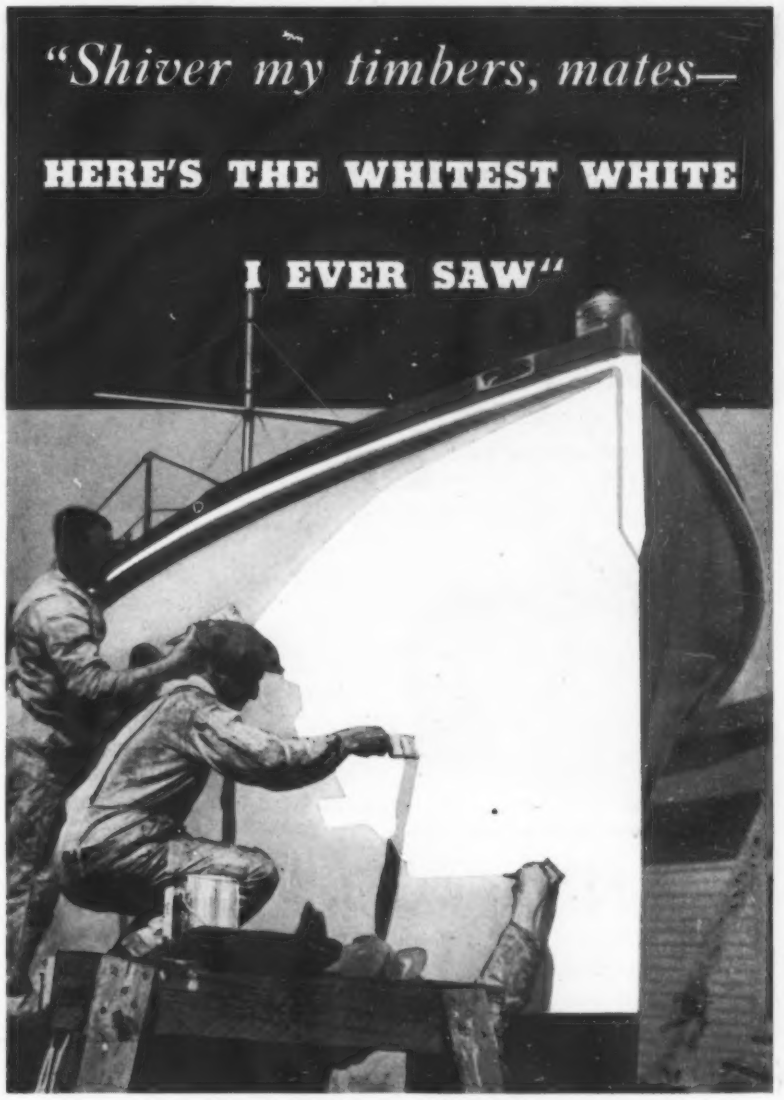


Figure 5 (above). Showing how the exhaust may be used to induce a draft of air in a ventilating duct

Figure 6 (below). A box ballasted to float as shown is an air pump when valves are fitted as indicated. Water rising and falling within the box acts as a frictionless piston


SUCTION HOSE CARRIED TO BILGE
LEATHER FLAP VALVE OVER OUTLET
LEATHER FLAP OVER INLET OPENING INWARD
WATER LEVEL
OPEN AT BOTTOM



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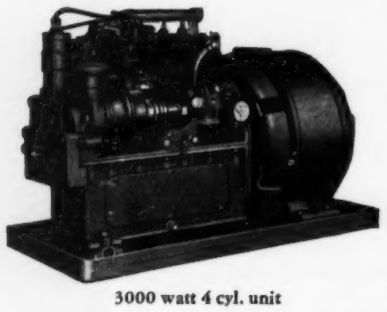

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that stagnant air has a more marked physiological effect as far as comfort is concerned than air which is slightly polluted but is in motion. With blower ventilation it is possible to get better agitation than with an exhaust system.

We read much of late regarding "air conditioning" and are led to believe that within a short time, by pressing a button we can live in the climate of Palm Beach or Labrador. Many owners have already spoken to me regarding the possibility of air conditioning their boats. For small boats I believe such a possibility is very remote. Air conditioning involves a large and expensive piece of machinery which requires power to operate it. For large yachts it is feasible for under deck quarters provided the owner is willing to make some sacrifices. He must sacrifice space that might be available for himself or his guests; he must add weight, which involves a sacrifice in speed for a given power, and he must be prepared to pay the liberal cost not only of the mechanism itself but the by no means small one of having it properly installed in the hull.

On the Building of a Yacht

(*Continued from page 59*)

the wake of masts. Flanged knees of metal are much better than the ordinary wooden knees, as they do not shrink and, being fastened by bolts and nuts, can always be set up.

In many boats metal floors are required to give tank room in the bilge. Their use is to be avoided wherever possible because of expense, corrosion and galvanic action.

In sail boats, diagonal metal straps, with their apices at the chain plates and legs attached to the keel, should be built in between the planking and frames. They distribute the pull of the shrouds into the hull and should be of bronze, as they can never be replaced except by removing a great deal of the planking.

Diagonal deck straps of bronze, extending from rail to rail, crossed at the masts and laid between decking and deck beams, stiffen the boat and strengthen the deck. It is foolish to use anything but the best bronze in a place where the expense of renewing is prohibitive.

Engine Installation

Engine installation in all its detail requires several separate articles. For such, the reader is referred to those written by George F. Crouch in the November, 1932, March, 1933, April, 1933, July, 1933, issues of YACHTING. In general, the foundation beds should be such as to provide the maximum of rigidity in order that the engine stay in line with the shaft and does not dance around all over the boat. This is more difficult in a sail boat than in a power boat, as usually neither length nor space is available in the former.

Exhaust pipes should be no smaller than specified by the engine builders. They should have as few sharp bends as possible and no traps if these can be avoided. The outlet should never be under water as that will produce back pressure on the engine and may cause it to heat and set up excessive vibration.

Use the size of shaft specified by the engine builders. It should be in perfect line, from the outer bearing to the engine, to avoid heating the intermediate bearings and to keep down vibration.

Intakes to the circulating water system should be located far enough below the water line so that when the boat is pitching or rolling they do not come out of water and cause the engine to suck air into the jackets and manifolds, which may cause dangerous overheating. In shoal draft boats which are to go into shallow waters, intakes should be placed as near the water line as is consistent with the above; otherwise the engine will draw sand or mud into the jackets and clog them. Sometimes two intakes are desirable, to be used at will, one for shoal water and the other for ordinary use. The openings should be carefully screened and the strainers and piping kept free from marine growth.

To connect inlet or outlet piping rigidly from hull to engine is bad practice as vibration will eventually loosen it. A short piece of hose inserted in the line will obviate this and will also act as a safety valve in case of obstruction, keeping the engine water jackets from bursting under the pressure exerted by the circulating pump.

Engine installation in sail boats is a tricky thing. The fact that the top of the engine is almost invariably below the water line creates the problem of keeping the exhaust pipe cool, and of preventing water from flowing back into the cylinders. This can be accomplished by carrying the exhaust pipe directly abaft the

engine as high above the water line as possible, using a special muffler tank, or a water-cooled section up to the high point and beyond that, turning the exhaust water into the exhaust line itself. There should be a gate valve installed in the exhaust line at the outer end, which may be shut off when the engine is not running and the boat is sailing in a heavy sea, to prevent water from slopping into the pipe.

In sail boats of moderate size the engine should be cockpit-controlled and the mechanism for this control should be substantial, with joints well fitted and machined to eliminate lost motion.

It has become pretty general practice in sail boats to install auxiliary engines so that the propeller operates on one side of the deadwood and rudder. On the whole, probably this is better than the older method of cutting away the deadwood and rudder to make room for the propeller on the center line. Although the boat with the propeller on one side will carry a helm when under power, this will be counteracted to a reasonable degree by using the proper rotation of engine and angularity of the shaft. The drag of the propeller and strut, when under sail, is probably no greater than that which comes from the hole in the deadwood and rudder and, most important of all, the propeller works in much less disturbed and more solid water when located clear of the deadwood. Of course, a feathering propeller should be used.

V-drives and reduction gears used to be noisy but have been greatly improved. Their use is indicated in many instances because a propeller of larger blade area can be installed, increasing decidedly the efficiency and driving power in a heavy hull.

It is not sensible to attempt to get too much speed under power in a boat designed primarily for sailing. When started, a hull of sail boat form and weight is easily driven up to a speed, roughly, of the square root of her water line length, expressed in miles. If driven much beyond that, the resistance increases rapidly and the results do not justify the expenditure of power and room inside the boat.

As auxiliary engines are often installed in confined places, all possible care should be used in providing ventilation to prevent explosion and fire. Watertight bulkheads up to the floor line are useful in keeping grease and oil from flowing into the bilge of the boat and the installation of a permanent fire extinguishing system is almost obligatory.

(To be continued)

Three Prominent Yachting Figures Pass

JOSEPH A. MacDONALD, president of the firm of Henry J. Gielow, Inc., naval architects and yacht brokers, passed away at his home in New York on January 11th. He was but 39 years of age.

Head of a firm that had designed some of the largest and most noteworthy yachts that have been built in America during the past ten years, Mr. MacDonald had a wide acquaintance among yachtsmen and those in the yacht building industry. Beginning as an office boy with the firm when Henry J. Gielow was at the height of his career as a yacht designer, practically his whole business career was identified with this organization. When Mr. Gielow died in 1925, Mr. MacDonald took charge of the firm, and its greatest success, perhaps, came in the next five years when some famous yachts were built.

H. deB. Parsons

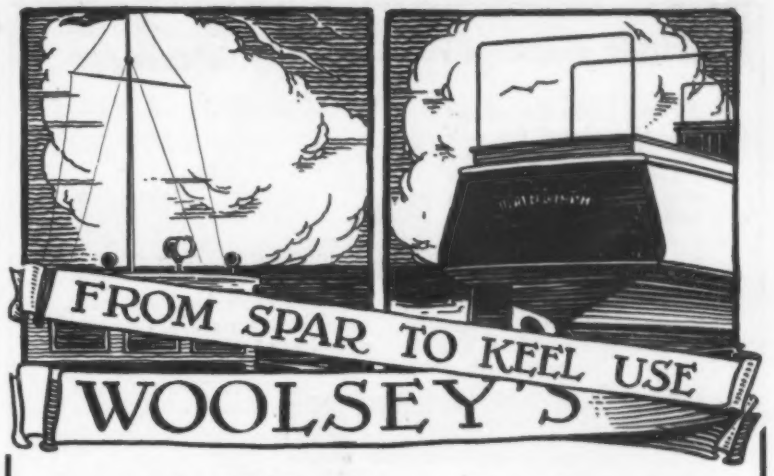
Harry deBerkeley Parsons, well known to racing yachtsmen as chairman of the Race Committee of the New York Yacht Club from 1907 to 1922, died at his home in New York City on January 26th, from a heart ailment of long standing.

Mr. Parsons was a consulting engineer by profession and was considered an authority on steam engineering. He had long been interested in yachting and the yacht racing rules, and he was the author of a book, "Handbook of American Yacht Racing Rules," which for a time was the only published interpretation of the complicated rules under which yachts were raced.

W. M. Eldridge

William M. Eldridge, head of the yacht brokerage firm of Eldridge & Company, New York, and chief timer for the American Power Boat Association from 1928 to 1934, died at his home in Stamford, Connecticut, on February 5th after a brief illness.

Mr. Eldridge was well known in power boat racing circles and had officiated as a starter in many of the country's most important speed boat regattas. He served as commodore of the New York Outboard Association, of the Regatta Circuit Riders' Club, and the Colonial Yacht Club.



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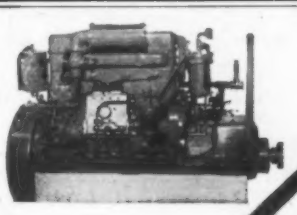

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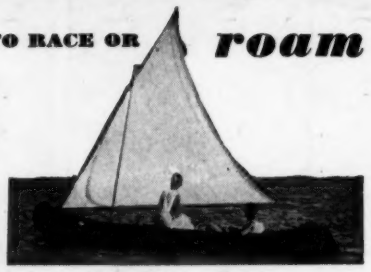

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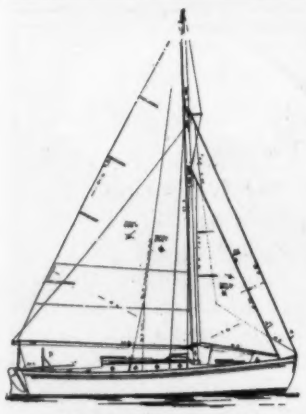

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Of Interest to the Skipper

U. S. Motors Generating Sets

AN ATTRACTIVE line of generating sets is announced by U. S. Motors Corporation, of Oshkosh, Wis. Outstanding features of these compact plants are their freedom from vibration and quietness of operation. All sets are on rubber mountings.

The 800 watt unit is driven by a single cylinder engine, the 1500 watt set has a 2-cylinder motor, while the 3, 5 and 7½ kw. outfits have 4-cylinder machines. The sets, up to and including the 5 kw., are built in 32-volt battery charging type units, and the 3, 5 and 7½ sizes are also built in 110 volt battery charging units. The engines are all water cooled, fitted with bronze water circulating pumps, and all are extremely compact.

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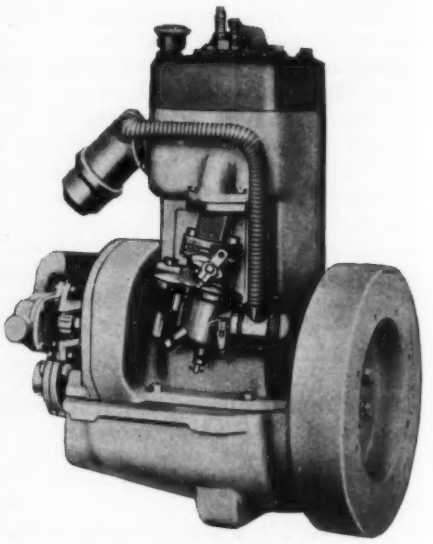
Universal's Latest

THE Universal Motor Company, of Oshkosh, Wis., has just announced another fuel oil engine. The new member of the line is a single cylinder motor known as Model 1-8. It develops 8 hp. at 1200 revolutions and is designed to burn ordinary furnace oil. At full power the fuel consumption is but 3.07 quarts per hour. Figuring the oil at 7 cents a gallon, this engine runs for less than 3 cents an hour at average operating speeds.

The motor is compact, being less than 18½″ long and 15½″ wide. Its weight is 236 pounds. It is a salt water job throughout.

Universal has also been making a careful analysis of the demand for repair parts and of the life of a motor. As a result, the company has determined the serviceable life of various engine parts and knows just which require to be replaced after a specified term of service. Even with the best materials and workmanship, it is impossible to prevent wear, so that Universal is now offering "Kits" to owners of its engines. These include the parts which experience has shown to be needed to put motors into first class condition. They are sold for a price some 30 per cent less than the total list price of the parts purchased separately.



A new single cylinder fuel oil engine, the Universal Model 1-8

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Federal-Mogul Propellers

AN IMPORTANT price reduction on Tru-Pitch Gold Seal propellers is announced by Federal-Mogul Corporation of Detroit. Gold Seal propellers differ from the standard models in that the latter are cast from Federalite-29, a high grade propeller bronze of moderate zinc content, recommended by the makers for general service. Its surface remains clear of marine growths even in badly infested water and it may be used with any standard shafting without serious electrolysis.

Tru-Pitch Gold Seal propellers are cast from Federalite-22, a low zinc content bronze alloy of superior physical qualities developed especially for *Miss America X*. The manufacturers recommend it for high powered high speed operation, where extreme resistance to distortion is essential. However, though practically immune to penetrating corrosion, it is not recommended for use in sea water with Monel shafting, or in salt water where barnacles and marine growths abound, except under conditions which permit occasional cleaning. The reason is that an insoluble and inactive protective coating will form upon the propeller, which, while it stops all further corrosion, may invite calcareous growths, especially in combination with Monel shafting. If not removed periodically, such growths will reduce revolutions.

In fresh water, or in combination with bronze shafting, or on runabouts or other small craft where it is readily accessible, and where strength is essential, the Tru-Pitch Gold Seal propeller, it is declared, provides a superior, long lived wheel.

The Equi-poise, a "custom engineered" propeller, was originally made for racing. Federal-Mogul engineers have now developed this design for each of the new Chris-Craft models. The Chris-Craft Corporation holds

the exclusive rights to these special designs and they will be distributed only through Chris-Craft dealers. Special racing wheels will also be available.

Another innovation is the copper alloy cylinder head which, it is said, gives increased power with greater fuel economy. These are now optional equipment on Chris-Craft 4- and 8-cylinder engines.

+ + +

Lycoming Announces New "Six"

A NEW 6-cylinder marine engine has just been added to the present line built by the Lycoming Manufacturing Company of Williamsport, Pa. The new engine, which is to be known as the Model UH, is a 6-cylinder motor with bore of 3 1/16", stroke of 4 3/4", and piston displacement of 210 cubic inches. It is rated 80 hp. at 3400 r.p.m. and will be available both in direct drive and with reduction gear.

The new "Six" is added to the Lycoming line of 4-, 8- and 12-cylinder motors, thus giving owner and builder a complete range of marine engines from which to choose.

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Improvements in the New Budas

ON THE latest engines manufactured by the Buda Company, Inc., of Harvey, Ill., the old type of starting system has been replaced with the new Startix. With this device, the operator merely turns the ignition switch and the engine starts almost instantly. Should it fail on the first try, Startix repeats until the engine is in operation. If the engine should stall with the ignition on, Startix goes into action and restarts it.

In twin screw craft, Startix will start either engine when it stalls. When necessary, Startix is capable of cranking the wheel if stalling is due to lack of fuel.

The new carburetor has an automatic drain system which disposes of the fuel that may accumulate in the intake manifold during starting, preventing it from dripping into the bilge. A completely sealed float chamber keeps gasoline from slopping out in a rough sea.

When the engine is throttled, slow speed is maintained by a separate idling system. When the throttle is suddenly opened, an acceleration pump automatically delivers an extra shot of fuel, thus securing instantaneous response. Fuel is metered through two jets, the main jet passing all the fuel required at part throttle and 85 per cent of that needed when wide open. At full throttle the rest is metered by an economizer jet which comes into action only when engine speed and load require a richer mixture.

A "V" pulley on the flywheel provides for driving an auxiliary generating set. There is also a new instrument panel on which engine temperature is registered at all times. Tachometer, oil pressure gauge and meter are also provided.

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Stearns Marine Activities

ANNOUNCEMENT is made that the Stearns Marine Company, of 126 State Street, Boston, Mass., has been appointed distributor for the State of Massachusetts for a.c.f. cruisers, Cummins Diesel engines, and Chris-Craft runabouts and cruisers.

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The Valspar Contest

AN INTERESTING prize contest was announced last month by Valentine & Company, manufacturers of the well-known Valspar marine finishes, in which the awards will go to the twelve boat owners who write the best letters on the merits of Valspar marine finishes.

The winner will have his choice of three cruisers, two auxiliaries and four runabouts in the $3200 price class while the second prize winner may choose an 18' outboard hull, a 31 hp. Evinrude, or a sailing dinghy. The next ten winners will have their choice of boat radio sets, signal flags, searchlight, alcohol stove, compass, marine speedometer, tachometer, diving helmet, marine glasses or electric horn.

The contest, which closes June 1st, is open to boat owners only. Entry blanks and full information may be obtained by writing to Valentine & Co., 386 Fourth Ave., New York.

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Richardson Expands

THE Richardson Boat Company, of North Tonawanda, N. Y., has recently found it necessary to build a rather extensive addition to its plant to take care of the 1935 business. This will mean an increase in the space devoted to the mill, the joiner shop, and the assembly line.

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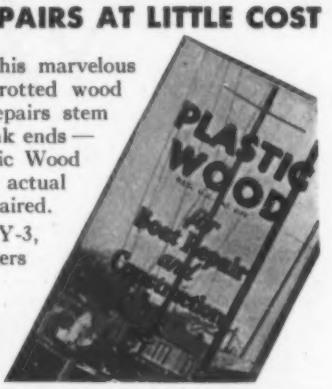

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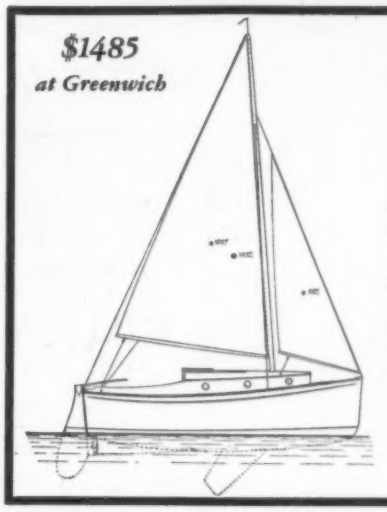

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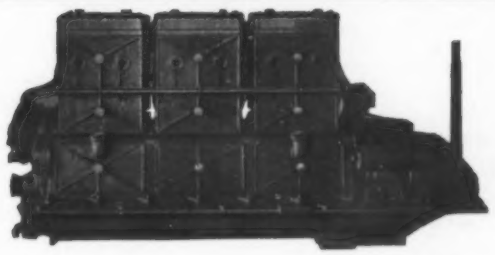

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